**TRANSACTIONS OF SOCIETY OF ACTUARIES**
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# DIGEST OF DISCUSSION AT CONCURRENT SESSIONS

## INDEPENDENCE OF THE ACTUARY

1. The work of the Joint Committee on Independence.
2. Duties of the profession to the public.
3. Should the actuary be expected to include in each formal report a citation of his adherence to the Guides to Professional Conduct, with appropriate qualifications if applicable, and a signature?
   *a*) Should the formal report specifically include a statement to the effect that, in the member's "judgment, the results make adequate provision for the continuation of the business or program and the satisfaction of all liabilities"?
   *b*) Should an actuary's "formal report" be interpreted to mean any report, internal or external to his employer, with respect to which others would look to him to assume partial or full responsibility?
4. May the actuary (who, perforce, adheres to the Society's Guide 4[*b*]) be an advocate, without full disclosure?
   *a*) Is it acceptable for the actuary to introduce situational bias in developing his results (i.e., reflecting his client's known objectives) *without* disclosure in his formal report?
   *b*) Should the actuary respond to a request to be "conservative" (or "liberal") without disclosure of these objectives in his formal report?
   *c*) Should the actuary be enabled to seek predetermined results or proceed with an approximate result as a target and "solve" for the assumptions leading to these approximate results *without* disclosure of these facts in his formal report?
5. What is the difference between rendering an opinion and certification, and if there is a difference, what is it that the actuary is expected to do?
6. How can the Society, as a professional organization, strengthen the independence of its members?

CHAIRMAN EDWARD H. FRIEND: The main theme of the report of the Joint Committee on Independence may be summed up in a few words —that independence cannot be defined and, as a result, professionalism and disclosure must take the place of independence. In order for that to work, professionalism and disclosure requirements must be strengthened.

The Joint Committee on Independence began its work after Mr. E. J. Moorhead, President of the Academy, acting on behalf of the presidents of the six societies of North America, called for appointments to the joint committee. There were eleven such appointments. From the Conference

of Actuaries in Public Practice there were three, Samuel Ain, Robert Bruce, and Barry Watson. The Society of Actuaries also appointed three members, Dale Gustafson, Paul Jackson, and Robert J. Myers. The Academy of Actuaries appointed two, Waid Davidson and me. The Canadian Institute was represented by George Wallace. The Fraternal Actuarial Association was represented by Walter L. Rugland. Also, Adger Williams represented the Casualty Actuarial Society. Finally, Dwight Bartlett provided much valuable help as a guest member of the committee.

A compendium of correspondence written on the subject of independence was sent to all the committee members on January 26. This compendium included writings of Andrew Webster, Jarvis Farley, Robert Winters, H. Raymond Strong, Dan McGill, J. T. Arenberg of the accounting profession, Robert Myers, Samuel Turner, H. E. Curry, E. J. Moorhead, M. B. Hutchinson, Gary Corbett, Dale Gustafson, Morton Miller, Stanley Huey, Thomas Bowles, and Dwight Bartlett. Later the committee was given a copy of the Scott report, with which those from Great Britain are quite familiar. A set of illustrative questions was sent along with the January 26 letter, and each committee member was asked to draft some more questions so that we could begin with nothing but problems, conflicts, and a host of new viewpoints.

The committee met in an all-day-and-evening meeting on March 5, 1974. The viewpoints were many, and I am sure that many of the committee members left that meeting wondering how anything would ever get started. Somehow we put together an early first version of the report on March 25. A second draft went in on May 14. This second draft had two alternatives, because Dwight Bartlett, who was a guest member of the committee, pointed out that if an actuary cannot assert that his findings would be the same, regardless of his postural relationship to the assignment, then the actuary should not regard himself as a professional actuary. One alternative second draft was developed along the lines of the earlier draft; in the other, the actuary was actually separated into two types, a professional actuary and an affiliated actuary. The committee quickly abandoned the affiliated/professional actuary dichotomy, replacing the concept of self-identification as an affiliated actuary with the requirement for disclosure.

A letter of July 10 contained a third draft of the report and a second draft of a cover letter to the presidents. The fourth draft of the report and the third draft of the cover letter went out on August 1. The fifth draft of the report and the fourth draft of the cover letter were forwarded on August 23, and the final drafts were dispatched on September 4.

The official charge to the Joint Committee on Independence is covered in paragraph 1 of the cover letter to the presidents of the respective actuarial organizations. The charge was "to draft a position paper and a set of guidelines on the circumstances, if any, in which organizational and financial independence of the actuary are desirable to avoid what may appear to be a conflict of interest in certification and other actuarial duties." The cover letter went on to say that the enclosed report reflected a lengthy deliberation among the members and that each of the conclusions encompassed a majority view, a minority view, and, in some cases, a minority modification to the majority view. The report was presented in columnar form with the proponents of each viewpoint identified. I must say that I was delighted at the end of our efforts that we had no less than eight out of eleven as a majority on each component segment of the committee's findings.

I would like to begin by asking the panel members to give you their views on each of the decisions. First, Dale Gustafson will present Conclusion 1.

MR. DALE R. GUSTAFSON: I will begin by reading the majority view on Conclusion 1:

> The "public" [and the public here would be whatever the body is, be it the general public, the Securities and Exchange Commission, the accountant, or whatever] will decide whether an actuary is acting "independently" and whether and when a particular kind of independence on the part of an actuary is needed in the best interest of that "public." The attitude of the "public" toward this issue will depend in large part on the behavior of the actuarial profession itself. Accordingly, actuarial professionalism and the actuarial profession's disclosure requirements are deemed to be overriding and obviate any need (other than in the case of actuarial audit—see Conclusion 4(iii)) to establish a definition of actuarial independence or any guidelines as to when such independence will be necessary.

Perhaps in an oversimplified fashion it can be said that I have been harping on a single string for several years, and just today in advance of this meeting I wrote this brief summary of that one-stringed harp. The use of the concept of independence has been influenced unduly by the accountant's example. The accountant nearly always deals with an audit situation, and we agree that independence is required in an audit situation. Other professions are rarely involved in audit situations, and thus independence usually is not an important feature. Examples are doctors, lawyers, engineers, geologists, and architects.

I also want to say that, particularly in connection with the develop-

ment of the audit guide for stock life insurance companies, and also to a certain extent in connection with the development of an audit guide for pension plans, there is some confusion and conflict as to what are the proper roles of the accountant and the actuary. I believe that it is very important to separate these two issues, that is, independence and who has the audit responsibility. The accountant has a responsibility for auditing financial statements. There are some who feel that the accountant is not competent to audit large parts of the life insurance statement, but important to the consideration of this joint committee was the separation of that problem, the problem of the relationship between the actuarial and the accounting professions, from the issue of independence per se. The point of view of the majority is that, except in the narrowly defined audit situation, professionalism, not independence, is the key.

CHAIRMAN FRIEND: Let us turn to Conclusion 4(iii), because, as Gus has indicated, this is the exception to the general rule which the committee developed. I will ask Bob Myers to address that particular decision.

MR. ROBERT J. MYERS: The majority view on Conclusion 4(iii) is that

> no actuary shall himself sign (or waive preparation of), or knowingly remain affiliated with an organization, a member of which signs (or waives preparation of), an *audit* certification of actuarial determinations to be relied upon in whole or in part by a "public" and which have been developed by an individual or individuals with whom he has a direct or indirect financial or organizational relationship.

It seems to me that this is laying it on the line and saying we mean it. The minority pointed out, I think with some justification, that this was really going too far—to hold a person responsible for what others in his organization might be doing, actions of which he might have very little knowledge. So the minority modification was much simpler, namely: "No actuary shall undertake to audit any actuarial determinations developed by an individual with whom he has any financial or organizational relationship."

Some might say that this is obvious—that this really seems to be just basic honesty, that you should not have your right hand, in effect, auditing or certifying what your left hand has done. However, it seems to me that this needs saying, and it seemed to the committee that it needed saying. I think that we were not aware of too many situations where this had occurred, but certainly this was one instance in this rather nebulous

area of independence and professionalism where we could speak out strongly. Surely there could be evasion of true professionalism and integrity if people indirectly or directly, openly or not openly, audited the work of some individual with whom they were financially connected.

CHAIRMAN FRIEND: I think it makes sense to stop here a moment and think a little bit more about what has just been said. Gus has discussed the basic question of the inability to define independence. I think that no actuary who year after year serves a client, even if he is a consultant with dozens of clients, is really independent, because of the relationship that he begins to build up with that client. Paragraph 4 of the cover letter goes into this, and I think it is worth reviewing. The letter says that "the majority reached its decision on Conclusion 1 after recognizing that the word 'independence' can have different meanings to different people under the same and differing circumstances. By way of illustration, Individual A argues that the otherwise independent practicing consulting actuary is no longer independent of a client whose business he values highly and from whom he expects recurring assignments. Individual A would argue that independence occurs only if the client's recurring business is never repeated by the same practicing actuary." I think this probably comes closest to real independence if it ever existed —that you do a job, you do it once, and you get out. You never come back, and you do not benefit from the recurring situation. The majority felt the position of the employee-actuary of an insurance company to be different only in degree from that of the aforementioned practicing actuary on recurring retainer. Individual B, taking exception to A, argues that the key phrase is "values highly." B says that as long as the client represents 5 per cent or less of his business, he is independent, because he can afford to lose that client. Now, if you accept that particular argument, the employee-actuary is no longer independent because he has one client representing 100 per cent of his "fees." Unfortunately, the problem arises when you examine the qualifying percentage. Should it be 5 per cent, or some other percentage? To what should the percentage be applied? To the actuary's entire firm's business if he is a consultant, to its branch office's business, or to the business which he personally services? How can there ever be an independent actuary "independent" enough to service a large client, necessarily "highly valued" by any percentage definition? And so the concept of independence of the actuary was summarily destroyed in debate in an attempt to find it. As in any laboratory situation, the "nonfinding" becomes a "finding" in and of itself.

Bob has pointed out to you that there is one exception, and that is

when the actuary audits. I might observe that an actuarial audit is really different (and Dale may disagree with me) from an accounting audit. I do not know of many accounting audits in which another C.P.A. is being audited. Usually, it is the books of an employer or the books of a corporation or a company. Here we are talking about a very particular kind of audit, an audit of one actuary by another actuary, the first of whom has already certified. The committee found that such an audit required independence, both financially and organizationally.

Moving on, Bob, do you want to touch on Conclusion 2?

MR. MYERS: Before I do that, Ed, I would like to comment on one of the points you made on the degree of independence of an insurance company actuary or employee-actuary as opposed to a consultant. I think you implied that an insurance company actuary, in having only one employer, might have a slightly lower degree of independence than a consultant. I can envisage circumstances where this would be the other way around. Perhaps I am being too idealistic, but I think that some insurance companies would encourage the independence of their actuaries. Such a company might take the position that the actuary should be independent in order that the policyholders of the company be amply protected by the actuary's being quite free to speak out. Such an actuary might have a much higher degree of independence than the consulting actuary, who would always be somewhat under financial pressure—if he became too independent, he might lose that particular contract.

I think it is very hard, as the committee found out, to say just what "independence" really does mean. I think that, in large part, independence or the degree of independence will depend upon the persons themselves and what professional views they have rather than on the way the job situation will develop.

When we came to Conclusion 2 on the relationship between the accountant and the actuary, the majority view was that

> the actuarial profession should not and cannot interfere with the audit and the audit prerogatives of an accountant. However, it should be recognized that an accountant normally is not qualified to make judgments as to actuarial determinations. The actuarial profession should continue to emphasize to the accountant, the regulatory authorities and the general public the necessity of professional actuarial determination of insurance and pension liabilities.

All but one person subscribed to this view, which in essence, you could say, is "live and let live." The accountants in their auditing responsibilities have certain areas and duties, and the actuary should recognize this. At the same time, there should be complete reciprocity; that is, the ac-

countant should recognize the unique role and capacity of the actuary in certain financial aspects of pension plans or insurance company operations which specifically relate to actuarial expertise.

The minority view was not so much a minority view as one saying, "If you believe that you can define independence, there is really no problem, and the relationship between the accountant and the actuary will be solved by this defining of what true independence is."

CHAIRMAN FRIEND: Notice that Conclusion 2 points up one very important observation. That is that the accountant, independent or not (and, of course, this is the accountant's word, "independent"), is on a par, professionally, with the actuary. What is important is that, whether he is independent or not, the actuary is a *professional* and he *discloses* qualifications (if any). It is not necessary that he be something called "independent." Of course, to take this very important position—that we can ignore independence—means that we must have strong professionalism (including accountability) and must disclose anything and everything that needs disclosing to avoid misunderstanding and misinterpretation. Conclusion 3 and the four subsections of Conclusion 4 go to the heart of what followed our decision not to define independence. You might say that our whole theme is that (1) we have recognized that independence cannot be defined and (2) we have recognized that we must strengthen professionalism and disclosure so that the concept of independence becomes unimportant. I would like to separate our discussion into these two parts: (1) our original conclusion that independence cannot be defined and (2) the consequences of that conclusion.

We will now move on to the question of how one strengthens professionalism, beginning with the exercise of actuarial judgment. Our two panelists are split on this topic. Gus is with the majority, Bob with the minority, and this has provided us, in our meetings, with some very lively discussion. I would say that Conclusion 3 probably took more time in committee (once we got over the initial hump) than anything else we did. Gus?

MR. GUSTAFSON: Bob used the expression "live and let live" as far as the relationship between the actuary and the accountant is concerned. I do not look at it in quite so dispassionate a fashion. My rationale for approaching the majority view and several of the aspects of this committee's deliberations is rather different. As far as the relationship between the actuarial profession and the accounting profession is concerned, I prefer to say that, at least for the time being, the battle with respect to the *Audit Guide for Stock Life Insurance Companies* has been

lost and that it was not a part of the charge to this committee to reopen that battle.

With regard to Conclusion 3, much time could be spent in honest intellectual combat on this rather esoteric subject. In thinking back, this was the heart of our problem. One of the members of the joint committee argued that it was absolutely a matter of no interest and not pertinent who his employer was; in a given circumstance he would come out with exactly the same answer to the tenth decimal place. Some of the rest of us could not and did not accept that. Unfortunately, the world is shades of gray, not black and white, and there is, according to the majority view, a range of acceptable results in almost any circumstance that an actuary is going to address himself to. If I were employed by General Motors, I would apply my very best professional judgment, and I would come up with one answer and I would not need to qualify it; if I were employed by United Auto Workers, I would apply my best professional judgment and I would come up with a different answer. Presumably I am not going to be doing both of those calculations, but in choosing assumptions, in choosing methods, and so forth, if you were going to come out with exactly the same answer every time, there would be no judgment involved, and we would not be a profession at all—we would be a mere technical specialty.

The majority view on Conclusion 3 reads:

> Actuarial science is not an exact science. Appropriate actuarial assumptions and methods reflect fundamental choices within a range of reasonable alternatives. Because some of these choices can be influenced by the circumstances of a particular assignment, the actuary should identify his postural relationship to each assignment he undertakes and should disclose any circumstances under which the nature of the results or the purpose for which they are to be used has influenced the choice of actuarial assumptions or methods utilized in developing the results. If, at any time, the actuary regards himself as having been responsive to pressures or affiliational conflict of interest in the development of his judgmental choices, he is obligated to qualify his determinations accordingly.

It must be noted that this bears heavily on both company and consulting actuaries. Increasingly, both are called upon to sign professional statements. The possibility of a report being misinterpreted probably cannot be totally eliminated, but this is aimed at reducing that probability as much as possible.

MR. MYERS: As both Ed and Gus have indicated, this was the point on which the committee probably had the longest, and probably also the most interesting, debate. There was a very clear division of views on this matter, and Paul Jackson and I saw this exactly alike. I suppose that the

other members of the committee were also in close agreement on their position. Although in many areas there is no such thing as all black or all white, yet in other areas there is (such as the well-known case of pregnancy—either you are or you are not). In the same way, on this question, there seemed to be no compromise—you either believed the way the majority did, or you believed the way the minority did. I hate to disagree with Gus on this, but I do believe that an actuary should give the same answer to a given problem no matter what side he is working for. I well recognize that there is a reasonable range of answers that could be given by different actuaries to a particular problem. I would never say that, because I obtained a particular answer, and somebody else a different one, it meant that the other person was wrong. I believe quite strongly, and I believe I am speaking also for Paul, that when a particular actuary works on a particular problem, it should not make any difference who is remunerating him for the job. It seems to me that this is so whether, in a pension plan, for example, you are working for the participants or working for the employer or working for both jointly; the answer ought to come out the same in any case.

I suppose that some people may say that I am just a university professor and speaking from an ivory tower. However, currently I do a fair amount of consulting work where this element does enter in. Also, some of my past experience was such that at times there were very serious problems of actuarial judgment and of producing an answer that somebody might or might not like.

I also recognize the elements of a glass house that all of us are in who throw stones such as these—namely, that, if a particular client wants a particular answer, he may know which actuary to go to. For instance, let us take the matter of damage suits where somebody has been killed in an automobile accident. A certain actuary might have a reputation for turning out high estimates because of the assumptions that he believes honestly are the best to make, whereas another actuary might use such economic and other assumptions that his estimates would always be on the low side. It is true, of course, that the public might then pick and choose their actuaries. But at least I think that the actuary should come out with the same answer no matter which side he represents—and say that he is going to come out with the same answer when he is approached by a lawyer, whether for the plaintiff or the defendant.

To my mind, perhaps being very rigid on this, I just cannot see why the particular client should make any difference in the work that the actuary does in valuing a pension plan, an insurance company, or whatever it may be. You might ask what happens if the client wants a particular answer

and wants to make certain assumptions because they will give that answer. It seems to me that, in good conscience, the only thing the actuary can do in that case is to relinquish the job.

I can foresee occasional circumstances where the particular employer involved, or whoever is interested in getting the actuarial work done, will want to dictate certain assumptions. It seems to me that there are two types of such circumstances. First, the employer might say, or in fact the provisions of the plan or the particular law in the case of a public employee retirement system might say, that the valuation is to be done at $X$ per cent interest. What does the actuary do in a case like that? If he believes that this $X$ per cent is unrealistically low or high, but for one reason or another he apparently must use it, then of course he does not do the job. But he may say that this rate is a possibility, and then it seems to me that he is duty bound, first of all, to make a statement explaining why he is using the rate but, most importantly, to make all the other assumptions consistent with the one which is "forced" on him. Of course, if he is forced to take two assumptions that are inconsistent with each other, he should just give up the job. In this "game" of being given assumptions, if the other party is compelled to make the first move of the game, to give you assumptions, you can then make the rest of the assumptions so as to have them consistent with those that were imposed on you.

One other thing does happen occasionally, at least in the field of government plans, where the government, for one reason or another, wants assumptions made about future economic conditions. If you are making cost estimates for some type of social insurance plan, particularly if it is a short-range estimate as to what will happen in the next year or two, the government may say that we cannot admit that business conditions are going to get worse or we cannot admit that there is going to be continued inflation when we are saying to the public that we are going to fight inflation. Even to admit in your actuarial estimates that there is really going to be inflation, despite what the government says, can possibly create the inflation that you are talking about. This is quite a dilemma, and I think that in this case the actuary properly should state that, on advice of the government, it is assumed that "this and this" is the case as to economic changes.

Once again, these must be assumptions that the actuary believes can reasonably be realized and that he therefore can go along with. I do not believe that this is any violation of the minority view that the actuary should give the same answer for everybody, because that type of general national economic assumption is like a description of a plan that the actuary starts in with when doing the actuarial work for the plan.

I think you have before you this very sharp division. Paul and I were perhaps accused of being unrealistic, and in this real world, as some of our worthy opponents said, we were trying to claim that actuaries could walk on water. I say that ideally actuaries can walk on water, and I think that they should make every effort to do so.

CHAIRMAN FRIEND: I am going to rebut Bob's comments for a moment, because, as you know, I was on the other side of this particular issue. I would cite a situation in which an employer, who feels that he is going to grow rather rapidly and needs as much money as possible to work on his expansion program, would prefer that use be made of the unit credit funding method in the pension plan, and, since you are working for him, he suggests that (and, by the way, this would not violate the new pension act) you use the unit credit funding method. If you were working for the employees or for the union, you might choose the entry age normal funding method to come up with the costs, and require contributions along these lines, giving no regard to the employer's concern about expansion. You might even choose different assumptions. The point is, and this is the key here, the majority view is that you could choose these different funding methods and different assumptions. You must disclose, however, the reason for your choice of these funding methods and assumptions. This is crucial.

A typical illustration of disclosure might be, as covered in paragraph 7 of the cover letter, the choice of assumptions you might otherwise not have selected but which you chose simply because another actuary preceded you and you want to keep continuity. You might have chosen a set of assumptions different from those that he chose, and perhaps you still will, but you might not go as far as you would have gone, had you been on this thing for the first time. To maintain continuity, you choose something in between. This should be disclosed. Again, professionalism and disclosure are the key to the second part of this whole effort.

Moving on to Conclusion 4, I am going to call on Bob again. Bob, would you handle Conclusions 4(i) and 4(ii)?

MR. MYERS: Again, if I can make some rebuttal to Ed's comments, I do not think that the choice of a funding method is really what we are talking about here. My point is that, once you have decided on the funding method, you should make the same assumptions no matter what party you are employed by. I think that the choice of a funding method is really more akin to the provisions of the plan. This is something that, in essence, is given in advance, and it is a starting point in making actuarial cost estimates.

As to the continuity of assumptions in going from what some previous actuary has done to what you might think desirable, again I think there is no problem. This procedure seems to be a reasonable approach, but the same transitional assumptions should be made by a particular actuary in this respect no matter which side he is employed by, whether the employees or the employer or the plan as a whole.

Getting on to Conclusion 4(i), this was one instance at least in which everybody agreed. This conclusion was a statement of belief that we should strengthen professionalism by having greater enforcement of the existing Guides to Professional Conduct and making it more apparent that something is really being done.

In this respect, at least in years past, any lapses from good professional conduct or ethics were usually of a relatively minor nature as far as I know. These incidents were always somewhat under cover, in what might be said to be a gentlemanly way that seemed to be in the best interest of the profession. But in recent years, with the growth of consumerism and the greater skepticism of the public about any establishment, it has seemed essential to the Society that more public information be given out on these matters. Of course, this should be done with proper protection of people's personal liberties. Therefore, in all but the most extreme cases, there should be disclosure not as to who was wrong but rather as to what was done that was wrong. Accordingly, Conclusion 4(i) states in effect that we should enforce what we have in the Guides, be certain that strong and proper action is taken, and have our membership and the public as a whole know that we are really doing something and that these Guides are not mere scraps of paper. I think that the Society is moving in this direction—I would say desirably.

Next, turning to Conclusion 4(ii), again everybody held the majority view, although there was one minority modification thereof. This was in regard to the fact that actuaries must, in connection with financial statements or other reports with respect to the operation of an insurance company or pension plan, sign such material and assume responsibility for at least the actuarial part thereof. It was suggested in the majority view that the form and content of such certification should be developed by the Joint Committee on Professional Conduct and should provide for identification of the actuary's relationship to the organization for which his certification is made, as well as setting forth any applicable qualifications and disclosure. In the covering letter, several general forms were given as to how this might be done, although the committee realized that this was somewhat beyond the scope of its responsibilities. Accordingly, the committee suggested that, if this approach were generally agreed to, more work on it could well be done by the indicated joint committee.

CHAIRMAN FRIEND: The formal certification to which Bob referred is not set in concrete, not proposed as part of the committee's job, but we do present something which is the kind of certification that we suggest be a first start; it has a place for an assertion that, in the judgment of the signer, the results make adequate provision for the continuation of the business or the program and the satisfaction of all liabilities. It also makes room for applicable qualifications and disclosures to be recorded and, in addition, the recording of the word "none" if there are none. Now that is not to be taken lightly. In other words, this cannot be left blank. Finally, the certification makes room for signature and relationship to the organization or the client for whom the statement was prepared. There is reference to the Guides to Professional Conduct in the body of the illustrative certification test. Some controversy arose in the committee as to whether we could simply refer to the Guides in this certification. Some members contended that the reader may not have the Guides available to him—he may not know what they say. And yet, if you put in the full text of the Guides, it would be very lengthy. So the decision here is left to others. No final recommendation was developed.

The last Conclusion was No. 5. Gus?

MR. GUSTAFSON: I am going to comment on the previous statement before I go on to Conclusion 5. One of the more subtle things the committee did appears in Conclusion 4(ii), and I will mention it. Somewhere near the middle of the majority view is the phrase "and signed by the actuary," and next are the key words "assuming repsonsibility for all or part of the statement or report." If you will think about that for a moment, you will realize that the implication is that reports may well be made that no actuary assumes responsibility for. Now the difference between the majority view and the minority view is the deletion of that key phrase "assuming responsibility for." The minority view simply makes the categorical statement that all such statements should be certified and signed by an actuary.

As for Conclusion 5, it was noted by the committee that with the thrust of the majority view there might be some inconsistency with the use of the word "independently" in the Guides to Professional Conduct. Guide 3 says in part: "The member will not perform such actuarial service if the conflict [referring to conflict of interest] makes or is likely to make it difficult for him to act independently. Even if there is no question of his ability to act independently. . . ." So Conclusion 5 is really a very simple thing, and the theme here will do: "Since 'independence' shall not be defined, the reference to 'independence' currently in the 'Guides' should be reappraised."

Now my own informal, quick reaction is that I am not upset with the use of the word "independently" in No. 3 of the Guides to Professional Conduct, even though the committee has not attempted to make a formal definition of independence.

CHAIRMAN FRIEND: Now I'm going to stir the old caldron. I am going to read to you, if you will bear with me, some very controversial material which has been written by actuaries and nonactuaries, people whom I wish were here; in their absence their words from the written page will help you perceive that the conclusions of the joint committee are not universally accepted.

I would begin by reading an excerpt from a letter dated August 31, 1971, from Mr. J. T. Arenberg to Mr. Raymond Strong. Mr. Arenberg is a highly placed member of the accounting profession. In response to Mr. Strong's assertion of the need for published actuarial opinion as part of published financial statements, Mr. Arenberg writes:

All of this is by way of saying that I'm not sure how the accounting profession can help in creating a requirement for the presence of the actuaries' opinion in published financial statements. It might be more logical for us to do something if it was common practice for all insurance companies to use independent actuaries. [He doesn't have quotes around the word "independent."] Since most companies do not, any effort on the part of the accountants to require publication of the opinion of the house actuary [I want to say "company actuary"] would be like requiring publication of the opinion of the treasurer or controller of any other commercial enterprise who happened to be a C.P.A. [I rebutted that position a little earlier; bear that in mind.] While their representations to the independent accountants are an important part of conducting an audit, they are not regarded as meaningful to the users of financial statements because of their lack of independence. To put it another way, the internal C.P.A. may be responsible for the preparation of his company's financial statements, and he may believe that the company's financial statements are fairly presented in all respects; but as a practical matter, it does little good for him to say so, simply because he cannot speak independently. If we are going to see the publication of actuarial opinions, it seems to me this problem should be faced. Again, I do not see how the accounting profession can help in this regard.

Reinforcing that view, a member of our own profession, Sam Turner, in June of 1972 wrote to the Board of Directors of the American Academy (I am excerpting from his letter):

This is my basic point: When an auditing accountant accepts the statement or opinion of an in-house [again] qualified actuary, the actuarial aspects underlying financial statements *have not been independently reviewed by an individual who*

*is professionally qualified* to perform such a review. The auditor is independent—*but not qualified*. The in-house actuary is qualified—*but not independent* [emphasis supplied].

I believe that the users of life company financial statements have a right to expect a review which reflects both qualification and independence.

As a concerned individual actuary, I ask the Board of the Academy to give up its apparent policy of non-commitment; to consider the question of independence; to take a firm stance on the resulting decision, whatever that decision might be, and to communicate its position to the membership of the Academy

A rebuttal to Sam Turner's comments comes from Mr. H. E. Curry, who says:

The thrust of Turner's view is that an "in house" actuary will compromise his professional integrity to remain on the payroll of his employer, whereas an "independent" actuary (a consultant) is immune to this temptation. I don't "buy" Turner's view for two reasons—(1) a responsible actuary will not compromise his professional integrity, and (2) the acceptance of Turner's view will create an unwarranted windfall to the consultants.

I am a little embarrassed about that second observation and will not comment further on it, except to observe that the consultants on the committee did not feel influenced by a desire to seek a business windfall. Andy Webster comments as follows:

I suggest that the analogy with the C.P.A.'s has been carried too far. I do not know the origin of the rule that the statements of an in house C.P.A. will not be accepted. It is possible that independent C.P.A.'s were in existence long before there were any in house C.P.A.'s but, no matter, that is a question for the accounting profession. I might add there is not, as far as I know, any supervisory body comparable to the State Insurance Departments.

Carroll Nelson wrote in a letter to the Board of Directors of the Conference of Actuaries in Public Practice in September, 1972:

I heartily support the view that, when a life insurance company's financial statements (whether GAAP-adjusted or otherwise) are to be audited, the actuarial items in those statements should be verified and certified to by an *independent* actuary, meaning one who is not an employee of the company.

. . . . . . . . . . . . . . . . . . . . . . . . .

I propose that the Board authorize a statement on position which emphasizes the co-equal status of the independent actuary and the independent accountant in their respective fields.

You will recall that a little while ago I was talking about coequal status between the independent accountant or the C.P.A. and the professional actuary. A letter to Mr. Jarvis Farley from M. B. Hutchison of the Crown

Life Insurance Company in December, 1972, contained the following paragraph:

> The major argument for the requirement of independence is that the accounting profession requires independence; therefore, the actuarial profession should. The presumption seems to be that a nonindependent cannot be trusted to present an opinion that the public can rely upon.

In response to that letter (which of course went on for some length), Mr. Gary Corbett, vice-president and actuary of Safeco Life Insurance Company, observes:

> I cannot agree that an in-house actuary's view is not affected by his employer. Such influence is, in most cases, only natural but there are undoubtedly some cases in which the Guides to Professional Conduct would not prevent an in-house actuary from giving a not completely "honest" opinion. This may result from a lack of knowledge on the actuary's part but, occasionally, from willful violation of the Guides. Admittedly, such cases would be extremely rare but one is probably too many.
>
> So far as your second point is concerned, I certainly agree that the in-house actuary is much better placed to determine the appropriate actuarial assumptions. The same could also be said of a company accountant in many areas. I would agree that the opinion of the in-house actuary as to the appropriate assumptions would be more reliable than that of the independent actuary. However, all of this would in no way prevent the in-house actuary from justifying the assumptions to the independent actuary. This justification might constitute a valuable review, quite apart from any legal requirements.
>
> To conclude, I would like to return to my basic point: the actuarial profession must determine whether it wants a requirement for "actuarial certification" on life insurance company financial statements. Before we can answer this question, we must understand all of the implications, one of which is the very probable requirement that such certification be by an independent actuary.

Now I would like to take you to the other side of the water to a very important report on linked life assurance presented by a committee chaired by Sir Hilary Scott, presented to Parliament by the secretary of state for trade and industry by command of Her Majesty, April, 1973. I am going to read several pertinent paragraphs from this particular report (chap. v, "Solvency," paragraphs 79–83 and 92):

> 79 We think that the increased competition and the more vigorous marketing methods that have accompanied the emergence of linked life assurance make it more likely that situations will arise where the actuary may be subjected to undue pressures. We have therefore considered whether the independence of the actuary, particularly when carrying out his statutory functions, could be strengthened by requiring that the annual certificate be signed and the valua-

tion report be prepared by a consulting actuary in the same way as an independent accountant audits a company's accounts.

80 The Institute of Actuaries and the Faculty of Actuaries (the actuarial bodies) and the Government Actuary's Department, to whose views we attach great weight, did not draw any distinction between the consulting actuary and the employee actuary. They did not consider that the likelihood of such pressures on the actuary is sufficiently great to give cause for alarm or that the position of the actuary is basically unsatisfactory. The Government Actuary expressed the view that the position of actuaries is strengthened by the knowledge that they can rely on the full hearted support of the actuarial bodies in upholding professional standards, and his Department keep the affairs of life companies under continual review.

81 A consulting actuary with a comparatively small practice depending largely on retaining the account of a particular life company might equally be subject to similar pressures. The system of employee actuaries has an advantage in that they are usually able to keep in closer touch with the day to day activities of the life company than can a consulting actuary. Many life companies provide a career structure for actuaries which enables some of them to move to senior management positions where they will remain receptive to professional actuarial considerations. We also think that any general transfer of the statutory functions of the actuary to consulting actuaries would markedly reduce the influence, and in consequence the calibre, of employee actuaries remaining with life companies. We are not convinced that requiring the statutory duties to be carried out by a consulting actuary would be the best means of strengthening the independence of the actuary.

82 In our view the likelihood of undue pressures being exerted on the actuary is greatest in the case of life companies which have recently been authorized or have undergone a change of control. We therefore considered whether it should be made mandatory for a life company to employ a consulting actuary in these circumstances. In practice many such life companies do employ a consulting actuary since the scale of their business is not sufficient to require the services of an actuary full-time, but for the most part they aim to employ their own actuary in due course. The Department have powers under section 65 of the Companies Act 1967 which would enable them to require a newly authorized life company to employ a consulting actuary if in the particular circumstances this seems desirable. We make a recommendation in paragraphs 117 and 129(ii) which would extend these powers to life companies which have undergone a change of control. In view of this recommendation and of the considerations set out in the preceding paragraph, we do not think that a general requirement that such life companies should employ a consulting actuary would be justified.

83 There are other changes which should be made and which would enhance the ability of the actuary, whether an employee or a consultant, to resist undue pressures. It was suggested that, as already applies under section 82 of the

Companies Act 1967 in the case of directors and other officers, life companies should be required to notify the Department of the name of the actuary who is responsible for signing the annual certificate and for preparing the valuation report, and of subsequent changes of that actuary. We agree with this proposal, which is supported by the actuarial bodies and by the Government Actuary, since it represents a public recognition of the fact that the appointment of the actuary is more than a private matter concerning only the life company. This notification would enable the department to make enquiries into the circumstances surrounding any change of actuary, and to take action if necessary.

92 Although our recommendations are made in the context of our enquiry into linked life assurance, the role of the actuary is of course vital in all forms of life assurance. Whether a salaried employee of the life company or an independent consultant, the actuary has come to be regarded as a watch-dog for the policyholders as well as owing a duty to the life company itself. This dual role has worked well in practice and, in our opinion, the high standing of British life companies and the important position which they occupy in the country's economy are firmly based on the confidence which the public rightly places in the expertise and vigilance of the actuaries and the Government Actuary's Department. Supervision based on a philosophy of freedom with publicity, on which the success of the life assurance industry is founded, can only operate so long as this confidence is maintained, and we have made our recommendations with this in mind.

Those are just excerpts, but they give you the feeling of the Scott report position.

Now in summary we go from Arenberg, representing the accounting profession, who asserts that "the concept of independence which is germane to the accountant is a special concept and until the actuarial profession has this, [the actuary] is not elevated to the standing of an accountant in the eyes of the public." And Sam Turner agrees. Andy Webster says that the analogy with accountants has been carried too far, and Hutchison notes that the major argument for requiring independence is that the accountants require it. The Scott report falls back on professionalism, and I would, in winding up this particular bit of observation, quote from a letter which Tom Bowles wrote to Jarvis Farley. These gentlemen have been engaging in some very heated debate on the subject. Tom makes eight points:

1. The C.P.A. is not competent in actuarial matters.
2. The C.P.A. admits that he is not competent in such matters.
3. The actuarial items in a life insurance company's balance sheet are material, being about 85 per cent of the liabilities shown on the balance sheet.
4. The C.P.A. should rely upon the actuary for an opinion on material items, upon which opinion, in turn, the public may confidently rely.

5. The interest of the public requires such comfort.
6. The actuary should assume full responsibility (and the liability related thereto) for his opinion as does the C.P.A. in accounting matters.
7. The public should be informed of the opinion of the actuary.
8. The opinion should be that of an independent actuary.

Tom makes a very strong statement at the end of this. He says: "Jarvis, it's distressing to find so many actuaries (particularly the in-house actuaries of mutuals) who want to strengthen the *profession* and yet say that the C.P.A. is competent to render an opinion on these actuarial items, even though the C.P.A. admits that such items are beyond his sphere of expertise. I have a lurking notion that two extraneous forces may be molding the thinking of some: 'independence' is a threat to the in-house actuary, and the cost of having an independent would 'upset' management."

Either your committee is right, or the accountants are right. Are C.P.A.'s really independent? Are we stacked up on both sides of this issue depending on our own self-serving interest? I have read a lot of material, and I would like to hear how the committee feels about these observations.

MR. MYERS: I suspect that Tom is not here, or he would be jumping up and down. I would agree completely with Tom on the first seven points, but I do not think that these necessarily lead you to the eighth one. I think—again with my great belief in actuaries or at least my great expectations for actuaries—that every actuary is really independent in the sense that Tom is talking about. I believe that an actuary from a life insurance company who signs a statement has just as much integrity and professionalism as an actuary from the outside who was brought in to do the same job. In fact, the employee-actuary would have more knowledge about the situation; in addition, I think that he is signing not only in the interest of the management of the company but also in the interest of the public (the policyholders) and that he is not trying to pull the wool over the eyes of the regulatory authorities or others.

I would say that, within the meaning of the word "independence" as I think Tom used it in his letter, I agree with the first seven points. As to the eighth point, I believe that an employee-actuary who signs the statement, if he is a true professional, is signing it in an independent capacity. Again I rest on what Ed says—that, even if a consulting actuary is obtained, he may not be independent, either for financial reasons or because he wants to get along with people and wants to be friendly with the management. At least that is what I think about what an actuary should be if he is with a life insurance company. Of course, I go back to one fur-

ther statement—if the public insists that they must have someone who is not on the payroll of the company, then you must have that added expense to satisfy the public. This gets back to our first conclusion, that the "public" must be satisfied. I hope that the public would not be that skeptical but rather that they would really have the faith in the actuarial profession that I for one have. But, if the rules of the game are changed so that an insurance company must employ a consulting actuary for such audit purposes, then it seems to me that this might seem to say to the employee-actuary in the insurance company, "Now this situation is more of a game, and you should want to make things just the way management wants them and not necessarily the way they really are."

MR. GUSTAFSON: First, and very simply in response to the way Ed put the question, I do believe that the majority of the Joint Committee on Independence came out with the right answer.

Second, and obviously more important and more difficult, I think it is extremely important to keep separate the various issues that are before us. Not that they can be solved independently—pardon the use of that word—they are interrelated. Is the accountant competent to audit the life insurance statements? What is the difference between company actuary and consultant? What is independence? There are several issues involved in those questions. One of the specific questions which Ed asked really does not bear on the deliberations of this committee, but I have an opinion and so I will offer it anyway. At the moment I am inclined to the belief that the accountant is in fact competent to audit the life insurance financial statement. That is a wholly different subject from independence, but the question has been asked and it is related.

CHAIRMAN FRIEND: We would now like to have discussion from the floor.

MR. E. PAUL BARNHART: I have comments on two of the joint committee's conclusions. On Conclusion 1, the definition of independence, I agree completely with the majority view that the emphasis must be shifted to professionalism and disclosure as the only practical means of dealing with the issue of independence, because independence cannot be defined in any practical way that would render such a definition, in itself, a satisfactory medium for determination of the existence of bias or conflict of interest.

However, I do not believe that the majority is really saying that independence cannot be defined. I think that a fairly clear meaning of the

*concept* of independence is obviously implicit in the comments and conclusions of the majority, and I think it is essentially this: Independence is the ability of the actuary to deal with an assignment in a completely objective manner, so that his work and conclusions are free of bias or influence arising out of his relationships with the assignment or the client. This concept is important and basic, and I see no reason why the Guides to Professional Conduct should avoid use of this term, as long as it is made clear that as a practical matter independence can be assured only through the media of professionalism and disclosure.

On Conclusion 3, I believe that the majority view is seriously inadequate. If I understand this view correctly, the majority is saying that if the actuary believes he has been responsive to pressures or affiliational conflict of interest, he is obligated to "qualify his determinations" accordingly—in other words, "qualify" but not "quantify."

Qualification alone would be sufficient, in my opinion, only if the actuary were satisfied that any influence on his assumptions, methods, or results was not significant to such results. In any instance where such influence had a significant effect on such results, the actuary should quantify the extent of this effect as well as "qualify his determination." This is necessary because the client or public concerned usually will not be able, otherwise, to evaluate the effect, either as to the extent to which assumptions were adjusted or as to the change in the results themselves.

This does not mean necessarily that such adjustments are improper or unprofessional. As the majority view states, and I agree, "appropriate actuarial assumptions and methods reflect fundamental choices within a range of reasonable alternatives." As long as the actual choices made are deemed to fall within this reasonable range, I do not see how they can be judged improper or unprofessional. Also, just as two different actuaries may make different choices within this range, I think it is entirely appropriate for one and the same actuary to recognize that such a range exists, and to select his assumptions within this range with the interests and viewpoint of his particular client or public in mind, as long as he appropriately qualifies his determination and also quantifies his determination if the effect on the results is significant as compared with other assumptions within the reasonable range. Surely similar latitude is widely utilized in arriving at legal or accounting opinions, and I do not believe the results are properly to be judged unprofessional on such account.

Let me offer an actual illustration. Several years ago I was requested by a client to review a "five-year profitability projection" prepared by another actuarial firm concerning a large block of major medical insurance. It was clear from the report that the projection was deliberately developed

using extremely conservative assumptions, presumably at the desire of the client. Among the assumptions used was an annual claim cost inflation rate of 20 per cent. The report recognized, however, that the coverage involved utilized many "inside limits" and stated that the existence of such inside limits was ignored, for *reasons of conservatism*, in arriving at the 20 per cent assumption. The report further stated that, if the limiting effects of such inside limits were taken into account, a lower inflation rate would be justifiable, possibly as low as 5 per cent. The results, however, using the 20 per cent assumption, were that the business was projected to be "unprofitable," and this was the sole conclusion offered in the actuarial report. Had a rate as low as 12 per cent been assumed, however, the projection would have swung into a "profitable" position. No qualification was offered as to the "unprofitable" evaluation made.

In my opinion, not only was it appropriate in this case to quantify for the client the range in assumptions considered reasonable (as was done), but the report should also have quantified the reasonable range in the results themselves (as was not done). The client, concluding that the business was definitely unprofitable, was in no position to evaluate the effect on the results had a lower inflation rate been assumed, such as 12 per cent, 10 per cent, or even the 5 per cent suggested by the actuaries themselves as the lower limit of a reasonable range. Accordingly, in my opinion this report was totally inadequate and improper, having failed to quantify for the client the highly significant effect on the results of the assumption of 20 per cent. As a result, the client was being badly misled and could well have made decisions, based on this report, wholly inimical to its own interests.

Accordingly, I believe that the minority view on Conclusion 3 is the proper view in any instance where the results may be significantly affected and surely in any instance where the public concerned would be in no position to evaluate such significance. I would deem the majority view satisfactory only when the actuary is distinctly satisfied that the results are not significantly affected by any influence on his choice of assumptions, even though such choice may be well within what is judged a reasonable range.

MR. DANIEL J. KUNESH: I would like to comment on Conclusions 1 and 4(iii) of the joint committee's report. Conclusion 1 indicates that, because independence can be defined satisfactorily for actuaries, the profession must develop an actuarial professionalism and a set of disclosure requirements worthy of convincing its public that its members are acting "independently" and in the best interests of that public. No one

would disagree that a single meaning cannot be given to actuarial independence that befits all situations. However, convincing the many publics we face that we are acting competently in their best interests via professionalism and disclosure may be even more difficult than defining an independence qualified by the nature of work being performed.

As a life actuary performing an audit function for a public auditing firm, I have seen many instances of error in judgment and lack of experience and expertise, leading me to believe that as actuaries we might not be able to achieve the desired degree of professionalism needed to gain the confidence of the many publics we may be responsible to. Professionalism, like independence, is a very difficult concept to define, and it is even more difficult to achieve. At best it requires more than technical training. It requires a complete understanding of the practical and legal circumstances surrounding a particular situation, that is, a "feel" and control of the situation that require experience in addition to training. Our membership is growing rapidly and on the average is quite young and inexperienced. Many of our young members would be the first to admit that, although they may have the required professional training, they would not feel qualified to prepare, for example, a certification of actuarial liabilities for a SEC filing, often required in a merger or acquisition, or a certificate to a state insurance department on a company's reserve liabilities, or a pension plan valuation. You may say that a requirement of actuarial professionalism may be for the actuary to divest himself of attempting to provide an actuarial determination in an area in which he feels he is not qualified. But can we assume that our membership as a whole will comply uniformly with such divestitures?

Additionally, it appears from observing other professions, such as accounting and medicine, that maintaining an air of professionalism is difficult even with the aid of full-scale accreditation by state and/or federal government bodies. To date, the actuarial profession has had only minor success in gaining such accreditation. The current pension legislation may assist the pension actuary to receive such recognition. However, as a whole, our profession is operating largely without it. One or more situations creating lengthy litigation, such as the recent Equity Funding fiasco, do not tend to serve our efforts in promoting a professionalism needed for public confidence and respect. It seems that, as a profession, we must work seriously toward achieving public recognition in order to improve our credibility rating with such government bodies as the SEC, state legislators, and Congress.

To say that requiring additional disclosure will enhance public confidence in our work is fine. However, who is to determine what adequate

disclosure is? Will the actuary be willing to disclose negative circumstances surrounding a client situation that are needed for a fair evaluation by the public when he knows his client will oppose such a disclosure? Will he be willing to risk loss of the client?

Conclusion 4(iii) indicates that an actuary should not audit, for public reliance, the work of another actuary with whom he has a financial or organizational relationship. This, of course, would preclude any company actuary from "certifying" actuarial determinations of his own or subsidiary companies because he is in both a financial and an organizational relationship to them. Public auditing firms require a high degree of independence from all parties involved in the audit. Accordingly, such firms generally forbid their professional staff (which may include actuaries) from having any financial or organizational ties to the client. If it retains a consulting actuarial or legal firm in performing the audit, it will generally require a statement claiming such independence.

In certifying a client's financial statements, the auditing firm is saying that such statements present fairly the financial position of that client on a statutory or generally accepted accounting principles basis, as the case may be. Since such certification leads to public reliance, it also leads to substantial liability on the auditing firm's part. Thus it is the auditing firm's responsibility to define those measures needed to minimize any creation of liability. If it employs the services of professionals other than accountants to perform part of the audit function, seemingly it has the right to define clearly how such professionals are to perform. If the ground rules are not acceptable to those professionals because they feel that their professional code of ethics or other self-imposed standards might be violated, they should refuse to accept the engagement.

Undoubtedly the committee's well-structured findings will form the groundwork for additional analysis of the questions of independence in certain situations, certification of actuarial determinations, and development of a set of professional standards. Such analysis is necessary if we are to enhance public confidence in our work. Since this affects all actuaries in one form or another, *all* actuaries should be concerned and should take an active role in resolving these questions.

MR. HENRY B. RAMSEY, JR.: I would like to state first that my postural relationship to the committee is one of complete independence. I would like to congratulate the committee on an exceptional job with a very difficult subject. The conclusions reached were not obvious at the outset, and the degree of unanimity in these conclusions is impressive indeed.

It seems to me that the committee has concluded that the actuarial content of financial statements or reports is the province of the professional actuary and that, therefore, it is proper and appropriate for a disclosure of the competence of the professional to accompany the published report. It also has concluded that there is no clear case for requiring independence on the part of the actuary except in the case of actuarial audit. Finally, it has not addressed the question of when an actuarial audit may be necessary or appropriate. This last question is clearly a critical one, and I am sure it will be the subject of much future discussion.

MR. JOHN G. WALLACE: As a member of the Faculty of Actuaries in Scotland, I appreciate very much the privilege of speaking at your discussion. I have been most interested in your problems in the United States and Canada which are similar to our own.

I would like to refer to the situation in the United Kingdom because so far very little reference has been made to item 6 of your agenda, "How can the Society, as a professional organization, strengthen the independence of its members?" In the United Kingdom our professional bodies are ahead of you, since the Faculty was granted a royal charter, establishing its professionalism, 106 years ago and the Institute in England 90 years ago. In addition, for about a hundred years our laws have recognized actuaries, and at the present time an actuary in the United Kingdom is defined as either a Fellow of the Faculty or a Fellow of the Institute.

I feel confident that, where an actuarial valuation is carried out for a mutual life assurance company, the actuary concerned in the United Kingdom will have given—and I feel will continue to give—completely independent advice. There is little conflict of interest in such cases, although from time to time there may be disagreement to some extent with board or senior management over new-business policy. This has never been serious in United Kingdom mutual companies so far as I am aware.

In the case of a proprietary (or stock, as you call it) company, however, conflicting interests do arise as between shareholders and policyholders. Some of our recent life assurance company troubles have arisen because of this conflict—largely in the relationship between assets and liabilities. A controlling shareholder might, for instance, decide upon a selection of investments quite unsuitable to the guaranteed liabilities the company is giving, although, if his judgment is correct, there would be substantial shareholding profits. Where it is wrong, of course, the shareholders lose their share capital, but policyholders' guarantees may not be covered.

This position has been strengthened recently to some extent in the United Kingdom by legislation which includes the following:

1. A company must register the name of its actuary with the Department of Trade. If the actuary is changed, the Department of Trade must be formally notified. It is considered that such notice of change places the department on guard, and the activities of the company will be closely watched.
2. Much more specific power has been given to the actuary to comment on the suitability of the assets for the liabilities of the company.
3. The Department of Trade has been given wide discretionary powers, particularly useful for new companies or for companies where a change of control has taken place.

Nevertheless, it is my personal view that the actuarial profession should try to strengthen the powers of the life assurance company actuary even more.

1. I would like to have an attempt made to produce a code of practice (not a code of professional conduct) to which actuaries could draw attention when the need arose. If such a code can be produced, it should be given publicity.
2. I would like a small group of senior actuaries (possibly including some recently retired) to be nominated before whom an actuary in difficulty over a matter of professional principle could put his case, subject to the permission of his company.
3. If, having adhered to the code of practice and having been supported by his senior colleagues, an actuary is forced to resign or is dismissed, then it should be obligatory under the law for him to specify his reasons to the Department of Trade.
4. I feel that the profession should press for improved efficiency from the Department of Trade. I have felt personally their recent activity to be inadequate, largely through lack of staff; this has been particularly true in relation to asset distribution.
5. The share capital requirements for a proprietary company should be reexamined, and the relationship of share capital to changing totality of risks assumed should be continually watched.

Although I realize that the United States and Canadian situations are different from that of the United Kingdom, I hope that these reflections may be of interest.

# PROBLEMS POSED BY UNITED STATES PENSION LEGISLATION

1. Problems for actuaries of insured single-employer plans
2. Problems for actuaries of noninsured single-employer plans
3. Problems for actuaries of multiemployer plans
4. The solutions as viewed by the government

CHAIRMAN PRESTON C. BASSETT: I would like to provide a little background. The Employee Retirement Income Security Act of 1974 is acquiring the reputation of being one of the most comprehensive and complex pieces of legislation ever to come out of Washington. The more I read and discuss this act, the more I am convinced this is true. I do not think we really know yet how complex it is going to be, and the problems are just beginning to surface. For example, let us look at the effective date of the compliance under the disclosure provision. This disclosure provision is the one that covers annual reporting. It is the one under which you, if you become an enrolled actuary, are going to submit a report in which you certify that the calculations involved are your best estimate of the results of your studies on the cost of this plan. This provision becomes effective in 1975. You will be certifying most cases on the basis of studies which you will do as of the beginning of the year, which means the valuations you will be doing as of the end of this year. Are you ready to comply as of this year end?

Funding requirements become effective for plan years beginning after December 31, 1975. Some plan administrators are considering complying with the law this year and not waiting until 1976. For example, if a company plans to put in a significant amount of money in 1975, more than would be necessary to meet the minimum requirements, and it defers compliance until 1976, those excess contributions that they make in 1975 cannot be carried forward as a credit in 1976. Once you comply with this act, you have a new start as far as minimum contributions go. Alternatively, if the company decides to comply as of January 1, 1975, its excess contributions are a credit and can be used to meet minimum requirements in future years.

Each of us will have to apply to become enrolled as an actuary. This is not automatic for members of the Society of Actuaries or for any other organization. Under the provisions of the act, you will become a party at interest. The question is still unanswered as to whether or not you are also a fiduciary.

The primary purpose of this act is to protect plan participants and their beneficiaries, and we as actuaries are a party to ensuring that this act accomplishes that purpose. This is a different approach—one to which we are unaccustomed and one that we must watch carefully. These are the types of problems we have to be alert to today, and these are the kind of questions we hope to answer.

MR. EDWIN F. BOYNTON: Because of the scope and complexity of the act, I can touch upon only a few significant provisions which are going to prove troublesome for a great number of plans. Many of these provisions will require clarifying regulations.

### CREDITED SERVICE FOR ELIGIBILITY AND VESTING

The 1,000-hour criterion (the one-half-year rule) established as a basis for the year of credited service, both for eligibility and vesting schedule purposes, obviously is going to create many administrative problems for all employers. During the past several weeks I have been involved in giving a number of seminars on the act, and one of the most recurrent questions boils down to this: "Is the 1,000-hour criterion for real?" Believe me, it is. It will turn out to be a fairly costly provision for certain industries, such as retail trade, which rely heavily on part-time employees.

Let us look at this as a good news/bad news type of situation. First of all, the good news is that the 1,000-hour criterion is *only* for purposes of meeting initial one-year eligibility requirements and establishing your place on the vesting schedule. It does not necessarily have to enter the benefit determination, and it is clear that you could still require a normal forty-hour work week for fifty-two weeks a year in order to receive a full year of credited service in the benefit formula.

The second part of the good news is that the criterion does not have to be applied retroactively. Whatever credited service rules were in use before the effective date of the act may be used to establish credited service on the vesting schedule for past service.

The rest is all bad news. The combination of the 1,000-hour rule and the break-in-service rules will pose some serious administrative problems for single-employer plans and certainly will require a dual record-keeping system, one for vesting service and the other for credited service for benefits. It takes a year with less than 500 hours to establish a "break-in-service year." It appears that once an employee crosses the 1,000-hour line to become eligible, and then reverts to a work year between 500 and 1,000 hours, he is in sort of a suspended state.

The other piece of the complex puzzle is the time-for-time break-in-service rule. This provision states that an employee can re-establish prior credited service with an employer if he again meets the 1,000-hour criterion prior to the time when the number of consecutive years with less than 500 hours equals the number of years of credited service previously established. To illustrate, if an employee worked two consecutive years of at least 1,000 hours, he would then have two years of credited service on the vesting schedule. Then, if the employee worked part time for the next several years, he could always keep a "string" on the first two years by not working less than 500 hours per year for any consecutive two years. If, after several years, he again recrossed the 1,000-hour mark, it appears that he could re-establish credit for the original two years of service, since he would not have had two consecutive break-in-service years.

### ELIGIBILITY

You are familiar with the "age 25 and one year of service" eligibility rule, which, considering the 1,000-hour rule, is really the "age 25 and one-half year of service" rule. A great many plans are not affected by this rule, but there is a significant number of plans that are.

Basically, the cost of switching from, say, a five-year waiting period to a one-year waiting period can be minimized by an appropriate adjustment in the turnover rates. The higher costs of this eligibility provision will be for those plans whose administrators feel that they must grant additional years of credited service retroactively to existing participants, in order to avoid discriminating in favor of the new entrants under the "age 25 and one year of service" rule. This is not a requirement, but in many plans there will be pressure to do this.

A related question arises with respect to those plans which for funding purposes use an arbitrary waiting period that is *longer* than the waiting period for eligibility under the plan. This may continue to be an acceptable actuarial practice, provided that the actuary is willing to make the appropriate certifications. On the other hand, in the actuarial statement that the actuary is required to file, he must disclose any benefits not valued, which I presume is intended to cover this type of situation. I think it would be wise for all actuaries to re-examine this funding practice and consider including all employees but assume a higher withdrawal rate.

### VESTING

I would not want to tell a room full of actuaries which of the vesting rules is the best or the worst, or the most expensive or the least expensive.

The relative cost of the three vesting rules in the act obviously is a function of the distribution of entry ages and relative rates of turnover at various durations of service. For typical age distributions it appears that the rule of 45 could be slightly more expensive than the others, and of course the group which tends to have high average entry ages would tend to make the rule of 45 more expensive.

My own view is that, except for unusual entry age or turnover situations, all three alternatives cost about the same, and the employer should select the one which best fits his benefit objectives. My own preference is to adopt a straight ten-year vesting as a simple and understandable rule.

ACCRUED BENEFITS

The three accrued benefit definitions, the $1\frac{1}{3}$ rule, the 3 per cent rule, and the pro rata rule, allowed under the bill have led to much confusion. Bear in mind that these rules apply to the determination of the accrued benefit for vesting purposes and do not necessarily require a modification of the normal retirement benefit formula. All these rules are aimed at preventing a theoretical bypassing of the vesting rules by something the staff has termed "backloading." The government staff employees should be familiar with backloading, since they are covered by a plan which is a good example of backloading—the civil service retirement system. It provides higher benefits for service *after* ten years than before.

The $1\frac{1}{3}$ rule probably will fit most unit benefit plans. Why $1\frac{1}{3}$? Probably because the backloading in the civil service retirement plan precisely meets the $1\frac{1}{3}$ rule. The typical single-employer plan on a unit benefit basis does not include any backloading, at least in the basic benefit formula. A considerable number of questions had arisen concerning early retirement supplements and subsidized early retirement benefits, but most of them were straightened out by the time the bill became final, so that early retirement extras do not create backloading problems.

An interesting problem for offset plans is whether or not all of them will be forced to use the pro rata rule. Under the present integration rules the accrued social security benefit for offset purposes can be determined either by a pro rata rule similar to that expressed in the act or by an assumption of zero earnings from the date of termination. Therefore, technically many offset plans using the zero earnings approach might have to be amended to adopt the pro rata approach. In many situations the zero earnings approach will produce a higher offset than the pro rata approach, so perhaps intentionally it is designed to eliminate the zero earnings approach.

The offset plans that spread the offset over a shorter period of time

than the period for accrual of the gross benefit may also have a problem meeting the pro rata rule and may have to be amended. That is, a plan which provides a benefit of $1\frac{1}{2}$ per cent of final average pay per year of service up to forty years, less 2 per cent of the social security benefit per year of service up to thirty years, might have to be changed.

The 3 per cent rule at first appears quite mysterious, but, as I understand its application, it will probably not be used much to test benefits under most single-employer plans. I believe it was designed primarily to handle certain types of Taft-Hartley formulas providing flat benefits after a stipulated period of service.

### JOINT AND SURVIVOR OPTION

The required option to allow election of preretirement joint and survivor benefits poses some interesting actuarial problems. For example, if the employer is not willing to absorb the cost of the option, how do you pay for it? One approach is to treat it as the so-called dead horse option, which was popularized several years ago by a few companies. In this case the employees who survive to retirement must pay, by a reduction in their plan benefits, the cost of benefits to the survivors of those employees who do not survive until the time of retirement. The actuarial theory in this one is simple, but the practical explanation to employees may not be so simple. For example, how large an actuarial reduction, if any, do you make in the employee's pension when he reaches retirement age, if the beneficiary of an employee who made the election dies partway through the preretirement coverage period? One way to solve this actuarial complication would be to pass a rule that beneficiaries are not allowed to predecease their spouses in the preretirement period.

A possible alternative is to set up a schedule of employee contributions by payroll deduction for all employees making the election. This could be set up on a sort of one-year term basis or by establishing a very rough level premium cost for the term insurance coverage involved. I believe, however, that a great many employers will avoid these complexities and simply absorb these costs.

### MAXIMUM BENEFIT LIMITATIONS

For the first time the laws regulating pension plans have placed limitations on the amount of pension benefits payable from pension plans, and on contributions made to the defined contribution plans. Being a first, the establishment of these limitations also poses some new problems, and there remain some very critical areas of interpretation which apparently can be solved only by the regulatory procedure.

If we focus on the $75,000 maximum pension, it does appear that this limit can be extended somewhat by application of the qualified joint and survivor option. That is, the language of the bill relates to annual benefits payable to participants upon retirement. If the employee elects a qualified joint and survivor option, the $75,000 limit, as later adjusted for the cost-of-living increases, would appear to apply to the reduced benefit being paid to the employee. As you can visualize, it has some interesting consequences. The actuarial equivalence factor for a 100 per cent joint and survivor option with a 65-year-old male and a 25-year-old spouse amounts to about 50 per cent. This interpretation would mean that the gross pension before reduction could amount to $150,000, since the application of the factor would reduce it to $75,000 being paid to the participant. In some circles this is being termed the "child bride rip-off rule."

There are other critical interpretations relating to the maximum benefit provisions which remain unanswered. Do the limits apply to employees retiring before January 1, 1976, and even to employees retired before the date of enactment? A literal reading of the bill seems to say yes. Presently retired employees would generally be covered by the grandfather clause, so this should pose no problems. However, if the plan was amended after October 2, 1973, or the employee received substantial pay increases after that date which affected the amount of his pension in excess of $75,000, it would appear that commencing January 1, 1976, the restrictions could become applicable and his pension under the qualified plan might have to be reduced.

A particularly critical interpretation of this section, however, relates to whether or not the defined benefit fraction may be set at a maximum of 1.0 in this test. It is not clear from the act, but it is at least implied that the grandfathering of the October 2, 1973, prospective pension does carry over to the combined benefit test, so that for this purpose you may start off with the maximum defined benefit fraction of 1.0. Obviously, if this is not the case, you would be in deep trouble. A prospective pension of $125,000 a year, for example, would start you off at 1.67 for the defined benefit fraction, already well in excess of the combined 1.4 limit. Since the potential penalty for exceeding the limitation is disqualification of the plan, you can see that this is a very critical interpretation.

## FUNDING

Funding is an area of special interest to actuaries, and I am sure that all of you understand fully the operations of the funding standard account and the alternate funding standard account. An important question which is not completely resolved by the act, nor by the conference com-

mittee report, I believe, is whether the aggregate cost and frozen initial liability methods are acceptable without determining experience gains and losses with each valuation. The original Ways and Means Committee report, however, did indicate that the use of aggregate cost and frozen initial liability methods produces an adequate spreading technique for the purposes of the bill, so hopefully that interpretation will stand up. Some actuaries, however, have interpreted one section of the funding provisions to require determination of gains and losses at least once every three years, simply for the purpose of testing the reasonableness of the assumptions. I do not interpret the act that way, although I admit that the interpretation is possible.

In any event, if you do use aggregate cost or frozen initial liability, you will be faced periodically with the necessity of making valuations on the entry age normal method to test for full funding. I have heard speculation, that actuaries will tend to shift to the aggregate cost and frozen initial liability funding methods to avoid messing around with the spreading of annual gains and losses as well as with the amortizing of various pieces of unfunded liabilities over varying periods of time. On the other hand, I have heard other actuaries say that they might as well switch to entry age normal, since in any event we will have to test periodically for the full funding limitation. They feel that the amortization problems involved with experience gains and losses are not overly complicated.

The law does allow one to combine various amortization periods into some type of composite, or average, period. Although the details of the averaging technique await regulations, it appears from a couple of tests we have made that, while such an averaging device would provide for spreading the actuarial losses over a fifteen-year period the actuarial gains generally will be spread over the longer composite period used for unfunded liabilities and other increases in liability—probably a twenty-five- to thirty-five-year period. This is because the net unfunded liability is to be spread over the period associated with the larger of the debit items (e.g., unfunded liabilities) or the credit items (i.e., actuarial gains).

We have in the act an alternate funding standard account which is there largely through the efforts of a few members of the Society and the cooperation of some of the congressional staff people. The provision is there, but it seems to have come out so encumbered that not many companies will attempt to take advantage of it. The possibility of having to spread the accumulated funding deficiency from the regular funding standard account over a five-year period is enough to make most employers shy away from this.

Another important area yet to be resolved by regulation is what con-

stitutes acceptable asset valuation methods. The law provides that the value of assets shall be determined on the basis of any reasonable actuarial method *which takes into account fair market value.* Are methods which provide for an arbitrary write-up on the value of common stock, or an imputed total return of the fund, acceptable when, in fact, they are calculated independently of the market value of the fund? A tougher question is whether, or to what extent, the actuarial value of assets will be allowed to exceed the fair market value. A number of methods in common use now allow this to happen, and, with the experience of the last couple of years, I am certain that many funds are now using an actuarial value of assets which exceeds the market value.

### AFFILIATED CORPORATIONS

The act contains some good news and some bad news for affiliated corporations. The bill provides, in effect, that, in making the anti-discrimination tests, all corporations under common control, or affiliated as defined in the Internal Revenue Code, are lumped together in testing for the discrimination provisions of the code. This does not mean that one must have a single plan, or similar plans, covering all subsidiaries, but it does mean that the distribution of employees by compensation in, say, a group of salaried employees proposed to be covered should not be markedly dissimilar from the distribution of compensation for the employees of all the affiliated corporations grouped together.

The good news is for certain multicorporation setups which in the past have had great difficulty in getting a plan approved because each separate corporation had to stand on its own. For example, I had a client with a chain of retail stores all over the country; each store was a separate corporation, making a total of some two hundred corporations in all. The company attempted to establish a plan covering employees of all corporations, but were told they had to qualify each plan separately at each store. Even with a reasonable waiting period for eligibility purposes, the large number of units caused horrendous problems in trying to get all plans qualified. The new bill would seem to allow this arrangement to be qualified by treating the entire group as one employer.

The bad news, however, is the holding company operation, where the subsidiaries may be involved in widely divergent operations. In this situation, there could be widely divergent types of pension plans among the various subsidiaries largely because of competitive considerations. If the holding company with many highly paid employees wants to have a liberal pension plan, they may run into serious qualification problems if some of the other operations have less generous plans or no plans at all.

### REPORTING AND DISCLOSURE

I am sure you are all aware that both the accountant and the actuary must render opinions regarding the financial and actuarial statements related to pension plans. The Academy was successful in obtaining the deletion of a provision in the earlier version of the bill which would have required the accountant to include in his certification some of the actuarial liability figures. Many of you are aware that the accounting profession is now reconsidering a revision of the accounting principles for pension plans, as well as the earlier draft of the pension audit guide. As of this date we do not know what position they might take with respect to their certification of pension fund financial statements.

With one notable exception, actuarial reporting requirements under the act generally are not too unreasonable. That exception is the provision which requires each actuarial statement to include a breakdown of plan liabilities in accordance with the termination priorities set forth in the termination insurance section. Suffice it to say that this becomes an actuarial nightmare and in many situations almost impossible to comply with. The act does contain language permitting the secretary of labor to modify or waive this particular reporting requirement in certain situations, and, hopefully, this will be done, thereby permitting actuaries and their clients to avoid the calculation of this meaningless breakdown.

### ACTUARIAL RESPONSIBILITIES

The act places enormously increased responsibilities on the actuary. Let me focus on a couple of troublesome points. First, are actuaries fiduciaries under the law? Up to now the Labor Department has not decided. However, the act has a very broad definition of fiduciary which certainly could be deemed to include the actuary. Further, and more important, the report of the House Labor Committee last Feburary stated very clearly that the actuary is a fiduciary under the act. I do not see how the regulation writers can ignore the strongly worded comments of the House Labor Committee.

A second related question which has been raised several times is whether or not enrolled actuaries can accept commissions if, in fact, they are fiduciaries. From my layman's reading of the act, it seems to me that enrolled actuaries could accept commissions. While the act has a prohibition against fiduciaries receiving payments from the plan, there is a very clearly stated exception to allow reasonable compensation for services rendered. I have heard indirectly that one of the key members of the Labor Committee staff has taken the position that enrolled actuaries, as fiduciaries, cannot accept commissions. The de-

cision in this area obviously would have great impact on the question of enrollment of pseudo-actuaries.

### TERMINATION INSURANCE

Finally, we come to termination insurance—something not really very important to single-employer plans. After all, who is going to worry about a government corporation that (1) has the power to charge you or your plan a premium to pay for your competitor's pension plan when he goes under, (2) has the power to decide for any one of a number of obscure reasons to file suit to take over your pension fund assets and appoint a trustee to administer them and which then gives you *three days* to challenge the takeover, (3) has the power to take over up to 30 per cent of your company's net worth to fulfill pension promises that you made long ago (promises which clearly stated that they were being made only to the extent of the sufficiency of pension fund assets), (4) has the power to charge you a premium to protect your competitor against having 30 per cent of his assets taken away in similar fashion, and (5) has the power to force you to rearrange your plan's termination priorities, possibly opening you up to suits on behalf of the participants whose pension rights previously vested in your plan could be taken away by such rearrangement?

So, as you can see, there is really nothing very much for the single employer to be concerned about in this whole termination insurance provision.

MR. LYND T. BLATCHFORD: The Employee Retirement Income Security Act of 1974 presents three major types of problems to the insurance company pension actuary. They are technical problems, professional problems, and social problems.

By technical problems I mean those situations in which it is not clear how the actuary should act. For example, the act requires the market value of plan assets to be shown in the actuarial statement portion of the annual report. For a group deferred annuity plan it is not clear how the market value should be determined for the purpose of this report. Similarly, in an individual policy pension trust plan it is not clear whether an individual whose retirement benefits have been purchased from and are fully guaranteed by an insurance company is still a participant of the plan for purposes of reporting and disclosure. As of a week and a half ago, neither of these points had been addressed by the Department of Labor Pension Task Force.

By professional problems I mean those modifications of conduct which are required of the insurance company pension actuary in his relation-

ships with his company, his company's client, and the field representative. For example, if an actuary is deemed to be a fiduciary under the act, what are his cofiduciary responsibilities if he should become aware of misconduct on the part of the agent, who might also be a fiduciary?

By social problems I mean the potential negative impact of the act on the creation of new plans and the maintenance of existing plans. In addition, I include the problem of the tendency on the part of actuaries and regulatory authorities to ignore the abuses that are found occasionally in small plans. An example of the former problem is the burdensome costs that may become associated with the actuarial requirements of the act. An example of the latter is the likelihood that for small plans the requirement that the plan administrator engage an actuary will be waived.

The primary professional problem facing the insurance company pension actuary is whether or not he can serve as the enrolled actuary for the plans that are funded through his company. Wayland Coe of the Department of Labor Pension Task Force asked for my opinion on whether the insurance company pension actuary can act as the enrolled actuary for a plan. His concern was that a potential conflict-of-interest situation exists. If one concludes that the insurance company actuary cannot act as the enrolled actuary, then one must also conclude that pension plans will be for all practical purposes beyond the reach of a number of employers.

Incidentally, it is my opinion that the insurance company pension actuary can act as an enrolled actuary, but it is going to require some revision of his traditional role in the performance of the actuarial work on a plan.

The act requires that the plan administrator engage an enrolled actuary on behalf of all plan participants. The secretary of labor may waive this requirement for plans subject to simplified reporting. Several points are noteworthy here. First, it is the plan administrator who has sole authority to engage the actuary. Second, the actuary must act in the interests of the plan participants. Thus it is now crystal clear who the actuary's client is and where the actuary's allegiance must lie. Let us examine what this means by looking at a few examples of some not too rare occurrences in the working lives of insurance company pension actuaries.

*Example 1.*—It has been a common practice for the agent in an individual policy pension trust situation to consider himself as the client for the actuary's services. Some companies have provided computerized actuarial services to the agent without benefit of review of an actuary. It is certain that the first

practice will have to cease, and it is very questionable whether the second can continue. I urge that actuaries in the first position and company chief actuaries in the second position immediately review these practices. A review of the Guides to Professional Conduct and the related interpretive Opinions is also in order.

*Example 2.*—As a group pension actuary you may be faced with an employer who is unhappy with the cost implications of your valuation and who threatens to withdraw the plan assets from your company if you do not adopt different assumptions. Your obligation is to the plan participants, and you must stand steadfast if you believe your analysis is correct. There is this consolation: the Department of Labor stands behind you, since the plan administrator must disclose in the annual report an explanation of the reason for any change in the appointment of the insurance carrier or enrolled actuary.

*Example 3.*—There is the situation where a competing funding organization has challenged the appropriateness of the funding vehicle your company is vending to the plan. Your defense, if any, of the funding vehicle must be based on the best interests of the plan participants, not on the best interests of your company. A more perplexing question arises if you as the enrolled actuary have solely and independently arrived at the conclusion that the funding vehicle vended by your company to this plan is not the appropriate vehicle under the circumstances.

Thus I urge that all insurance company pension actuaries obtain opinions from their company counsel, first as to what procedures should be adopted to acknowledge properly their engagement as an enrolled actuary and second as to what steps should be taken so that all parties (the company, the agent, and the company's client) are fully and properly informed as to the actuary's allegiance in matters affecting the welfare of plan participants. Finally, I remind you that the Guides to Professional Conduct and the interpretive Opinions require that (1) the actuary ensure that his report is transmitted to the client unaltered, (2) the actuary be clearly identified as the source of the opinions contained in the report, and (3) the client have direct access to the actuary, so that he may verify his understanding of the actuary's report.

It is the opinion of a number of individuals that an actuary acting as an enrolled actuary for a plan is a fiduciary of the plan. An individual is classified as a fiduciary if he has discretionary authority or control with respect to the management or disposition of plan assets, if he renders any investment advice for a fee, or if he exercises any discretionary authority or responsibility for plan administration.

If the actuary is not deemed to be a fiduciary merely because he is the enrolled actuary for the plan, it is relatively easy for him to become one. For example, in discharging his duties, he might recommend to

the plan administrator that current contributions be invested in relatively liquid assets so as to make it easier to meet currently emerging liabilities. It is clear that high standards are expected of the enrolled actuary, and the insurance company pension actuary would be well advised to have his company investigate the desirability of furnishing professional liability coverage.

An insurance company is a fiduciary if plan assets are invested in a separate account. Some authorities feel that an insurance company becomes a fiduciary when it provides administrative services to the plan. Similarly, some authorities consider the agent to be a fiduciary. It is very clear that if any agent is not a fiduciary by reason of being an agent, he may easily become one in the normal course of his activities. The act provides that a fiduciary may be liable for a breach of fiduciary responsibilities of another fiduciary if he has knowledge of such a breach and has not made reasonable efforts to remedy the breach. For example, if the actuary hears that another fiduciary has arranged for an early retirement settlement more beneficial than that provided by the plan, the actuary must take steps to remedy that situation if he is not to be jointly liable. Further, the actuary must take prudent steps to protect the plan participants in his capacity as enrolled actuary. I recommend that all insurance company pension actuaries seek the advice of their company counsel and bring to their attention the fact that not only the actuary but also the company and the agent may become fiduciaries.

As a final statement on the professional aspects of the act, I would like to point out that the actuary must disclose in the actuarial statement portion of the annual report "such other information as may be necessary to fully and fairly disclose the actuarial position of the plan." This requirement, more than any other requirement in the act, gets to the heart of actuarial professionalism. It effectively prevents the actuary from merely mechanically satisfying the law. It requires the actuary to perform a valuation, not a calculation. It requires the actuary to look at a plan to see whether it meets not only the letter of the law but also the spirit of the law. The insurance company pension actuary frequently is privy to information that may affect the welfare of the plan participants. Under this provision he is bound to disclose such information.

There probably has been much overreaction to the provisions of the act. There have been predictions that the small pension plan will become extinct and that there will be a strong movement toward defined contribution plans. Without a doubt there will be a trend away from defined benefit plans in the small-plan area. The extent of this trend is largely in the hands of the regulators and actuaries. These two groups,

by their actions, can either make small pension plans a viable alternative in retirement planning or put such plans beyond the reach of the typical small employer. Let us review briefly the provisions of the Employee Retirement Income Security Act which are intended to alleviate the administrative cost problems of small plans:

1. The act recognizes the peculiar provisions of fully insured plans, thus permitting them to continue to be available as a funding vehicle. Further, the act provides exemption from the funding standard and actuarial statement requirements for fully insured plans.
2. The act empowers the secretary of labor to prescribe simplified reporting for any pension plan which covers less than one hundred participants.
3. The act empowers the secretary of labor to waive the requirement that the plan administrator engage an actuary and an accountant on behalf of the plan participants if the plan is subject to simplified reporting.
4. The act empowers the secretary of labor to prescribe an alternative method for satisfying the requirements of reporting and disclosure if such alternative method provides for adequate reporting and disclosure.
5. The secretary of the Treasury and the secretary of labor have been instructed to coordinate to the extent possible the actuarial reports each requires.

It is clear that the fully insured provisions will assist in the reduction of the administrative costs of plans so funded. The insurance company pension actuary need only be concerned to the extent that the product meets the requirements of the act and that no policy loans are effected, either directly or through inadvertent use of the automatic premium loan provision.

At first blush, it may appear that the simplified reporting requirements, if properly drafted, would also assist in reducing the administrative cost burden of smaller plans. But this is not necessarily the case, since plans subject to the simplified reporting requirements must still amass and maintain the information required for full reporting. Any cost savings will accrue to the Department of Labor, not to the individual plans.

Certainly, if a plan does not need to engage an accountant or an actuary, its administrative costs may be correspondingly reduced. We should question at what price such a cost reduction is achieved. I will touch upon this later.

The coordination of actuarial reporting requirements between Treasury and Labor should benefit large plans and small. Perhaps Russ Mueller can give us a prognosis on the likelihood of such coordination occurring.

Before discussing alternative methods of reporting and disclosure, I would like to touch briefly upon those provisions of the act which tend to aggravate the administrative cost problems of small plans.

1. The eligibility requirements will create a greater flow through the plan of employees who will never remain long enough to vest or retire. The record-keeping problems are burdensome to any plan. However, for the small insured plan several additional cost problems arise
   a) The typical individual policy pension plan has a single entry date during the plan year, the purpose of which is to reduce administrative costs and to keep insurance purchases on a consistent basis. Under the act, if a single entry date is to be retained, the eligibility requirements can be no more stringent than six months of service and age $24\frac{1}{2}$.
   b) The typical individual policy products are not well suited to high turnover situations.
2. All pension actuaries are confronted with the costly requirement of allocating liabilities for nonforfeitable benefits by the plan termination categories specified in the act. This problem is aggravated for the insurance company pension actuary because there is no provision for an exclusion of benefits purchased from and guaranteed by an insurance company. These problems are difficult when these benefits have been purchased within the company but are literally impossible when they have been purchased outside the company.

What can be done to alleviate these small-plan cost problems? First, the regulators must be sensitive to the cost/benefit ratios when regulations are developed. There is more than one way to reduce benefit security of plan participants, and inappropriate and costly regulations is one of these ways. Second, insurance company pension actuaries should address the cost problems inherent in the funding vehicles vended by their companies. Third, these actuaries and the regulators should work together to develop alternative methods of reporting and disclosure which would maintain an appropriate level of protection for the participants while reducing to the maximum extent possible the costs associated with this protection.

I mentioned earlier that the secretary of labor has the prerogative of waiving the requirement that the plan administrator engage an actuary and an accountant on the behalf of plan participants. To the extent that the secretary avails himself of this prerogative, I feel that the interests of the plan participants have been compromised—unless alternative safeguards are developed. This is not the only place where the act seems to ignore the interests of participants in small plans. For example, plans of professional service employers with twenty-five or fewer participants are exempt from plan termination insurance. It is my understanding that the Pension Benefit Guaranty Corporation is considering construing this exemption broadly so as to avoid becoming involved with small plans. I believe that these are social problems with which the insurance company pension actuary should be concerned. We have the means

available to develop alternative approaches for these plans, and, if we do not and small plans fare badly in the future, we are going to see future legislation which is contrary to our own interests and well-being.

There appear to be no bounds to the problems posed by the legislation with respect to insured versus noninsured or single versus multiemployer plans. The following recitation of technical problems is not intended to be complete but reflects those items of particular interest to the insurance company pension actuary.

A number of problems are peculiar to the small plan, for example:

1. It is difficult, if not impossible, to relate assumptions to experience, since small plans do not have an averaging effect, yet the act requires such a relation.
2. If there is a decrease during the year in the number of plan participants to fewer than 80 per cent of the number at the beginning of the year, it is a reportable event to the Pension Benefit Guaranty Corporation. This could be a decrease of as few as one or two participants in a small plan.
3. A reportable event might occur when a "substantial employee" retires and more than $10,000 is taken from the fund to purchase an annuity and there are unfunded vested liabilities remaining.
4. The vesting provisions are minimums. In a small plan, do not expect Internal Revenue Service approval of the ten-year, 100 per cent cliff-hanger.

Other problems are peculiear to individual policy pension plans or group permanent plans, for example:

1. It is impossible to move from an unallocated to a fully insured funding vehicle because of the accrued benefit requirements.
2. For combination plans vesting will now have to be in terms of the pension benefit. This will cause several problems, namely,
   *a*) The accrued benefit normally will be much higher than the accrued benefit under the typical old basis—the cash value of the policy plus a side fund allocation. This can cause serious emerging liability problems on account of terminations.
   *b*) It is not possible to deliberalize the current vesting provisions in the plans. Thus the actuary must set up procedures to compare these nonhomogeneous vesting provisions.
3. The treatment of pension benefits which have been purchased from, and fully guaranteed by, an insurance company is not clear. The problems are outlined below:
   *a*) Is it necessary to include such benefits in reporting and disclosure? What if the benefits were purchased from another company—must records be maintained for such a participant who has no financial interest in the plan?
   *b*) The Pension Benefit Guaranty Corporation is authorized to recapture

benefit payments which began within three years prior to plan termination. How is this to be accomplished when the benefits have been purchased from an insurance company?

4. It is typical in these plans either to distribute the policy on termination or to pay cash. Few deferred benefits are maintained. Procedures will have to be established for deferred benefits, and, where cash-outs are permitted, pay-back procedures must be established. It is questionable whether it is now desirable to permit cash-outs.
5. Under a contributory fully insured plan it is possible that a participant's accrued benefit from his own contributions will exceed his policy cash values. Potentially an employer may have to make up the difference if the participant terminates.
6. In a plan with an early retirement provision, it probably will be desirable to meet the joint and survivor requirement by defining the death benefit as the greater of the insurance death benefit and the present value of the survivor benefit. In this case make sure that the participant cannot name as beneficiary anyone other than the spouse.
7. Do not permit the automatic premium loan provision on fully insured plans —you may find yourself establishing a minimum funding standard account.

For group plans there is the problem of defining the market value of deferred annuity funds invested in the general account. Also, employers may not be too happy to have the cost-of-living feature, since it may make their contingent liability open-ended.

Salary information has taken on new importance under the act, since different definitions may be required for purposes of (a) computing the plan pension benefit, (b) computing the benefit limitation, (c) computing the insured benefit, and (d) computing the accrued benefit.

For those actuaries involved with individual retirement accounts the following problems are interesting:

1. If the annual premium is $1,500, a mode change will put the premium over $1,500.
2. If the mode is changed to a less frequent mode, the total paid in the calendar year will probably exceed the limitation.
3. The individual retirement account is not a desirable vehicle for rolling over benefits from a qualified plan because of the loss of the favorable special averaging taxation privilege.

The Employee Retirement Income Security Act will have a substantial impact on all parties involved with pension plans. The insurance company pension actuary must become concerned with the future of the small pension plan. To ensure its continued viability, he must seek out new products, methods, and procedures. He must work with the regu-

latory authorities to achieve regulations that are truly beneficial to the interests of all plan participants. Of equal importance, the insurance company pension actuary must become aware of his new responsibilities and of his altered relationship with his employer, his employer's clients, and the field representative. To sum it all up, the insurance company pension actuary must become a professional in every sense of the word and must be prepared to accept the professional liabilities that come with this new position.

MR. THOMAS D. LEVY: Over the years in the United States and Canada, a large body of pension plans known as "multiemployer" plans has developed. These are plans to which two or more usually unrelated employers contribute, with the result that service for all participating employers is aggregated in determining the person's benefits at retirement. The bulk of these plans are jointly managed by equal numbers of trustees of the participating unions and participating employers and are frequently called Taft-Hartley plans. These plans are established under collective bargaining agreements, and the contributions are usually set by those agreements as a certain number of cents per hour or per ton of coal mined or according to some similar measure. The trustees retain an actuary who establishes a benefit that can reasonably be supported by this level of contributions.

The Employee Retirement Income Security Act of 1974 recognizes such plans in a number of different ways. Certain provisions, for example, some of the insurance and funding provisions, are related specifically only to those multiemployer plans which qualify as such under the act. Other sections are applicable to all plans but are of greater importance to multiemployer plans, for example, the 1,000-hour test for a year of vesting service or the 3 per cent rule for accrual of vested benefits.

For the purpose of the pension law, a multiemployer plan is defined as one maintained pursuant to one or more collective bargaining agreements between an employee organization and more than one employer, with no single employer accounting for more than 50 per cent initially, or 75 per cent thereafter, of the total contributions. Also, benefits on account of service for which contributions were actually made must be payable to each participant without regard to the cessation of contributions by his employer. Thus some funds which we have come to regard as "multiemployer" will not be considered to be so under the new law. For example, a multiemployer plan which curtailed benefits to a person whose employer discontinued contributions, or a multiemployer fund with a dominant participating employer who contributed more than

half of the total, would not be a multiemployer plan for the purpose of the act.

Of the several problem areas concerning multiemployer plans, I will concentrate principally on those which have an actuarial impact. The first problem deals with the definition of multiemployer plan itself. Contributions are the basis for the 50 per cent and 75 per cent tests. Many multiemployer funds involve numerous collective bargaining agreements expiring at different times, with different contributions and different benefits payable at any given point in time. Thus an employer covering significantly less than half (or three-quarters) of the employees of a multiemployer fund could, for some period of time, have a higher contribution rate than average and as a result contribute more than 50 per cent (or 75 per cent) of the money in that short period. Presumably as other contracts came up for renewal the percentage would drop back again, but there might be a period of time when a multiemployer fund did not meet the test.

The act requires that an actuary's valuations be certified as reasonable, but such certification is a problem for many multiemployer funds because of the margin for error in the best available data. Current service records normally are complete and reliable. But age and past-service data often are incomplete. Many of these plans are in industries characterized by irregular employment, with an employee often working for many employers in the course of a single year. Enrollment cards often are missing or incomplete for these workers. At best, past service is imputed from a census card completed by the employee. Employment records normally are not verified until the person applies for benefits. As a result, the actuarial data provided by such funds may be characterized by large numbers of employees with unknown age or service or both and a large number of employees for whom the known data are based solely on the employees' own recollections. In these circumstances, the actuary will be in a position of certifying costs based on actuarial assumptions that probably are reasonable but for reasons beyond his control, may be subject to some margin of error.

Multiemployer plans are in a special category in the area of funding under the pension law. In the case of a new plan, the initial unfunded past-service liability may be amortized over forty years, as compared with thirty years for other plans. Similarly, increases in unfunded liabilities resulting from plan amendments or new assumptions may be amortized in forty rather than thirty years. An experience loss may be amortized in twenty years instead of fifteen.

To the extent that contributions are insufficient to meet the act's

funding standards, an excise tax may be payable. Multiemployer funds face a special problem in that area because, although the contributions are defined by the collective bargaining agreements, the benefits are established under a set formula and, therefore, also are defined. It is possible for a funding deficiency to develop simply because the projection of the number of employees working and the number of hours they work may prove to be inaccurate. This occurs relatively frequently at present, when an economic slowdown has resulted in fewer people working than was the case when the last collective bargaining agreements were negotiated. A strike in the industry could have similar effects. In order for the employers to be able to meet all their obligations under their collective bargaining agreements (and at the time they negotiated those obligations they could have fully expected all the funding standards to be met), the trustees could have set the benefits in full expectation that all the requirements of the funding portions of the pension law would be met. Nevertheless, through no fault of either the employers or the trustees, contributions could in fact be less than those minimum funding standards. According to the statement of the conference committee (although it is not stated explicitly in the act), there will be special rules for any plan maintained pursuant to one or more collective bargaining agreements which provide for predetermined levels of contributions for the duration of the contract period. Most such plans are of the multiemployer type. If at the beginning of a contract period the actuarial assumptions were reasonable and the actuarial calculations were correct, and if the negotiated contributions are made as required, no funding deficiency will be declared if the contributions fail to meet the funding requirements. If the plan suffers experience losses (a shortfall of contributions that is not the result of employers failing to meet contractual obligations will be treated as an experience loss), the next contract can provide for them by increasing contributions or decreasing benefits. What will happen if the next contract does not do so is a difficult question which is as yet unanswered.

Some multiemployer plans receive contributions as a percentage of payroll rather than a dollar amount per unit of work. The law provides that any such plan in existence on January 1, 1974, may elect to fund past-service liabilities by contributions at a level percentage of payroll, provided that they are at least equal to interest on those liabilities. This assumes, of course, that the assumptions as to interest and future payrolls are reasonable.

If a multiemployer plan has to reduce liabilities to meet the minimum funding standards, it may adopt an amendment retroactive to two years

prior to the date of adoption, whereas other plans can adopt amendments retroactive for a period of only two and one-half months. This provision reflects the limitations imposed by a negotiated contribution.

The act provides that actuarial assumptions in the aggregate are to be reasonable, taking into account the experience of the plan and expectations. It is not unusual in multiemployer plans to have the trustees adopt the assumptions, or at least insert in the minutes a statement to the effect that they accept the calculations and the assumptions as reasonable. If an actuary has in the past stretched an assumption at the direction of the trustees, he will no longer be able to do so.

A number of questions for multiemployer fund actuaries arise under the Pension Benefit Guaranty Corporation provisions. There is provision that, in the event of plan termination, the allocation of employer liabilities will be in proportion to contributions in the five years preceding plan termination. This will have to be modified if it is not to give rise to serious inequities. Some Taft-Hartley plans are characterized by a variety of contribution rates which different employers negotiated at different times. The method of allocation, applied literally, does not allow for these differences. Employers negotiating identical benefits at different dates could have substantially different obligations, although the employees of each would get the same benefits. The law does in fact provide that the liability of each employer may be determined on any other equitable basis prescribed by the corporation through regulations, so we may look forward to some relief in this area.

There are a number of problems for the actuary in determining exactly what the level of insured benefits is at any time for a multiemployer fund. The first problem is the data itself. Since past-service records are not verified prior to retirement, the vested benefit for any individual may be significantly different from that shown in the fund's records. A second problem relates to employment in service which is not covered by the plan of a participating employer. For example, consider a person who worked for a participating employer in a nonunion or supervisory position after previously working under a collective bargaining agreement that provided for contributions to the multiemployer fund. The fund would not know of this unreported employment and yet would be required to count such service in determining whether and to what degree vesting had occurred. Thus, in preparing actuarial reports for the Pension Benefit Guaranty Corporation, the actuary knows that the level of vesting could be significantly different from that indicated by the fund's records which are made available to him. A third problem arises in funds that have many different contribution rates, benefit rates,

and contract expiration dates. The fully insured benefits relate to the plan as in effect five years before termination. Benefits based on more recent changes are partially insured. In construction trades, the trucking industry, the baking industry, and many others, employees move very freely between employers and may work for several employers at different rates of contribution in the course of even a single year. To determine the benefit level which applies to any given individual on plan termination will be difficult. To find the level of benefits insured for each individual from the data normally required for an actuarial valuation would be an enormous undertaking, far in excess of the scope of present actuarial valuations.

Evaluation of assets also raises questions. Many of these funds have used cost value for their assets because the contributions are predetermined. That is, since fixed contributions are essentially level, it is important that all areas of actuarial cost also be kept as level as possible. Cost value was used by many funds because as an asset valuation base it tended to be very stable from year to year. Apparently, this no longer will be acceptable, and actuaries will have to develop write-up procedures that reflect market value but do not have drastic fluctuations in asset value (and therefore actuarial cost) from year to year.

If an employer who has contributed at least 10 per cent of the total contributions for each of two consecutive years withdraws from a multiemployer plan, he is required to furnish an indemnity bond or make payment to cover his possible liability in the event of plan termination. Determination of the liability for such an employer is still another difficult actuarial problem. As a parenthetical note, I might comment that, given the nature of the possible employer obligation, up to 30 per cent of his net worth should the plan terminate, some accountants may require that this potential liability be disclosed in the corporation's financial statements. The burden on the actuary of doing such a calculation for each participating employer in the multiemployer fund would be extreme. Hopefully, a carefully worded statement without numbers will suffice.

Having covered the bulk of the actuarial problems, I would like to mention a few administrative problems that with respect to multiemployer funds stem from the act. Many provisions which have precise literal applications to such plans will have to be implemented by regulation if they are to be administratively feasible and equitable. Here are some of the major ones.

In order for an employee to participate, a plan may require comple-

tion of a year of service (which is defined as a twelve-month period, beginning with his date of employment, in which he works 1,000 hours). Most plans accumulate records based on calendar quarters, calendar years, or fiscal years and are not in a position to determine the number of hours worked in a period that does not coincide with the one that is used. We trust that regulations will deal with the issue.

Several references are made to notices and reports on account of separation from service. The fund administrator generally does not know when a person terminates service. He receives only remittance reports in a given reporting period showing how many hours an employee worked. This is a major problem in the construction trades and maritime industry, where jobs are filled by the union and an employee may work for a dozen or more employers in the course of a single year, often with intervals between jobs, without ever leaving the coverage of the multiemployer plan.

The joint and survivor annuity provisions apply to a participant only if he was active on or after the plan year beginning in 1976. Someone may finish a job late in 1975 and die early in 1976 without having started on a new job. Whether or not he was active is an important question, and the answer is not clear.

The Pension Benefit Guaranty Corporation must be notified whenever the number of active participants drops more than 20 per cent from the number at the beginning of the plan year. Apart from the fact that the administrator normally cannot make any count until after the reporting period, he will need guidance on what class of participants he must consider active and how he may reasonably estimate their number.

Certain documents and reports must be furnished to each participant. Generally, administrators will not have the current addresses of large groups of participants. Some practical method of disclosure will have to be worked out.

Each separated employee is to receive a statement of his vested deferred benefit. Again, how is the administrator to decide whether an employee has terminated and how much service he has?

The participant's insured benefits may not exceed his average wages during his highest-paid five years of participation (or $750 per month if less). Most administrators have no information on participants' earnings.

Under certain circumstances, a multiemployer plan may suspend payments to a pensioner who is employed in the same trade and the same geographic area in the same industry as that from which his pension first became payable. Regulations will have to deal with the meaning

of employed in the same industry, trade, and area and with the permissible period of suspension.

Obviously, in the multiemployer field there will be many opportunities for actuaries to work with the government to try to solve the actuarial and administrative problems posed by the pension reform act.

MR. RUSSELL J. MUELLER: H.R. 2, the pension reform bill which was signed into law by President Ford this past Labor Day, has been hailed as the most important labor legislation protective of employee rights since the enactment of social security in 1935. However, the praise heaped upon this historic piece of social legislation by Congress has been accompanied in realistic fashion by qualifying remarks as to its potential shortcomings and defects.

Congressman John Erlenborn has expressed his approval of 90 per cent of the final legislation but has voiced his reservations about the effects of plan termination insurance on the growth of defined benefit pension plans. Congressman John Dent, who as chairman of the House General Labor Subcommittee worked hard for over eight years to bring about pension reform, has summed up well the approach taken by the Senate-House conferees regarding the law: "We know that there will be many trials and errors in its interpretation and in its administration, but we have also promised the House that if and when these particular problems crop up we will come to the House and help in trying to resolve the problems in favor of a perfect working pension system in the United States."

It is agreed that the act is not a perfect one, but H.R. 2 is *not* what Ralph Nader and several of the other more vocal critics have claimed —"a terrible disappointment." Congressman John Erlenborn gave the appropriate response to these critics when he likened them to "the man who standing by the sea with eyes cast heavenward, complained 'and another thing, Lord, there's too much salt in the water.' "

If not a "terrible disappointment," then what is it? Even a hasty reading of this new law ought to bring home to employees, employers, and all concerned a dual message of increased rights and increased responsibilities. The act gives new rights on a broad scale to employees and their beneficiaries who are members of pension and welfare plans:

1. They must be told in simple language about the provisions of their plans and their rights under the act.
2. They may enforce their rights through court action.
3. They must be permitted to join the employer's pension plan and become vested in their accrued benefits after a certain minimum time.

4. They may contribute to their own pension plan if the employer has none, and obtain a tax deduction for it.
5. They are guaranteed continuation of pension payments even after a plan termination.
6. They are assured of the honest handling of their plan's assets.

These broad new employee rights do not, however, come easily. I would like to emphasize that these new employee rights are obtained through the vast new responsibilities and obligations placed by the act on plan sponsors, plan administrators, trustees, fiduciaries, lawyers, accountants, actuaries, and other plan advisers. For example:

1. Plan administrators must disclose comprehensive information on plan dealings and employee rights, with any failure subject to civil and, in certain cases, criminal penalties.
2. Employers must revise all written plan documents to clarify who has management control of their plans and to establish certain plan procedures (e.g., a claim denial procedure or a right to a joint and survivor annuity).
3. Fiduciaries (which may include under a broad definition plan sponsors, actuaries, consultants, and others) must deal with plans and their assets under a "prudent man" standard and are subject to certain prohibited transaction and bonding requirements.
4. Employers must bring their pension plans into compliance with minimum participation, vesting, and funding standards or risk the imposition of civil penalties, excise taxes, or plan disqualification.
5. Employers with defined benefit pension plans remain liable for up to 30 per cent of their net worth for vested benefits which are not funded in the event of plan termination.

This, then, is what pension reform is all about—new rights created by new responsibilities and new costs. Admittedly, the reform is a compromise, but for the most part a well-reasoned one, in an effort to create the framework for a retirement system which can continue to play a major role in meeting the economic security needs of the nation's work force.

Before turning to the specifics, we should not overlook the farreaching policies that have been set by the act. First, it has been established that the proper attitude of the federal government is to foster the expansion and improvement of private pension plans and not to view them simply as devices to erode the internal revenue base. Second, the act promotes retirement savings which can help to reduce the fires of inflation. More important, it will slow, and perhaps help to reverse, the trend toward dependence on government programs and checks by encouraging individuals to take their own initiative to plan and save for their retirement

years. Finally, the act, while providing for adequate regulation, has preserved to a large extent the flexibility that pension plans need for their continued growth and prosperity. The act is lengthy and appears complex because it offers choices (e.g., in vesting, accruals, and funding) and not a singular solution which would put private pension plans in a federal straitjacket.

Of course, Congress did not have to adopt the approach that was taken to ensure equity in the operations of private pension plans. The alternative would have been to force every pension plan into an ideal pension mold, which would then have to be operated according to a textbook of restrictive rules and regulations. To some the simplicity of such an approach would have been most appealing:

1. Every pension plan would have to meet a single vesting standard.
2. All benefits would have to accrue on a uniform basis.
3. Vested benefits would be based on and payable at the age at which retirement benefits have the greatest actuarial value.
4. Assets would have to be valued on a market basis.
5. Regulations would stipulate standard actuarial methods and assumptions for funding.
6. Assets would have to be invested according to restrictive lists.
7. Benefits would have to be cut back for both high- and low-paid employees to meet certain limitations.

Under this approach there would be little need for the independent judgment of investment managers, actuaries, and other professionals. The point is that Congress rejected this alternative. They were persuaded that plan sponsors, plan administrators, accountants, actuaries, investment managers, and other plan advisers would accept additional responsibilities in order to ensure adequate protection for plan participants and their benefits.

The problems as outlined by the other members of our panel should at this point appear to be minor compared with what could have been the situation under the alternative. Admittedly, there are some provisions of the act which may prove to be "troublesome." However, many of these so-called problems are only signs of the "pension tension" which has been created by apparent ambiguities in the act and the lack of clarifying regulations.

Over the next few years, the IRS and Labor Department regulations will deal adequately with about 75 per cent of the situations now perceived as problems. Forced changes will be necessary to deal with another 20 per cent of the problems. In this age of "future shock" most persons will learn quickly to live with these required changes. That leaves the

most troublesome 5 per cent. Certain provisions of the act may prove to be unworkable or unenforceable. Serious drafting errors may yet be uncovered. As to these problems, I would like to refer you back to Congressman John Dent's promise to come forth with correcting legislation.

I might point out that plan sponsors and other interested parties have a continuing obligation to make any problems known to the regulatory agencies as well as to the congressional committees. The act itself has provided means whereby interested parties may be heard. The opportunity for direct input into the operation of the Pension Benefit Guaranty Corporation by labor, management, and the general public has been established through a seven-member advisory committee. In addition, the act established a fifteen-member Advisory Council on Employee Welfare and Pension Benefit Plans which is to advise the secretary of labor with respect to the carrying out of his functions under the act. An actuary is to be appointed to serve on this advisory council. For the most part there should be adequate time and opportunity for all interested parties to be heard concerning their problems.

The point was made before that the act places greater responsibilities on professionals, including actuaries, in order to achieve a large measure of self-regulation. The statement made by Mr. Andrew C. Webster in the January, 1974, issue of *The Actuary* now has behind it the force of law. He said, "The actuaries must accept the liabilities as well as the assets of belonging to a recognized profession and as the general public becomes aware of the existence and skills of the actuaries they will expect a high degree of social responsibility in the profession."

Emphasis should be given to the fact that this statement has general applicability to all professionals in the employee benefits field and not just to actuaries. In other words, the actuary is treated under the act in the same manner as accountants, investment advisers, and other professionals. To the extent that actuaries, accountants, or any other persons have any discretionary authority or discretionary responsibility in the administration of an employee benefit plan, they will be assumed to be fiduciaries under the act.

Fiduciaries must discharge their duties with respect to a plan solely in the interest of the participants and beneficiaries. In addition, the actions of fiduciaries are subject to a "prudent man" test. Section 404(a)(1)(B) of the act requires that a fiduciary discharge his duties "with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims."

The act also gives special recognition to the specialized knowledge and competence of the members of the actuarial profession. In this regard, the administrator of a pension plan subject to the funding requirements of the act must engage, on behalf of all plan participants, an enrolled actuary. The enrolled actuary is required to prepare an actuarial report setting forth certain actuarial costs and liabilities and "such other information as may be necessary to fully and fairly disclose the actuarial position of the plan." The actuary must also furnish his opinion as to whether the figures reported are in the aggregate reasonably related to the experience of the plan and to reasonable expectations and as to whether they represent his best estimate of anticipated experience under the plan.

The act specifically addresses many of the questions regarding disclosure and the responsibility of the actuary that are now being discussed in a concurrent session on "Independence of the Actuary." The act intends that the requirement for the actuary to give his "best estimate" be interpreted to mean that the actuary should establish a single set of methods and assumptions to be used in all cases where a valuation of a plan (on an "ongoing" basis) is made. Reporting of figures to participants, stockholders, and the regulatory agencies must now be on a uniform basis established by the enrolled actuary. In response to an issue brought up by another panelist, the actuary may no longer set his assumptions or "stretch" an assumption at the direction of the trustees or of anyone else.

The act recognizes that the choice of appropriate assumptions is very much a matter of judgment and that it would be inappropriate for employers, trustees, or others to replace the actuary's independent judgment in these matters. The minimum funding standards were established in order that participants be reasonably assured of receiving the benefits promised under their plan. The act requires the actuary to use his best estimate of anticipated experience under the plan. Therefore, those factors which have affected plan costs in the past and which the actuary knows will be operative in the future must be reflected in the actuary's best estimate of anticipated experience. Certainly increases in wages and salaries due to inflation fall into this category. "Realistic" assumptions as to inflation when combined with other realistic assumptions would still be subject to the test that all assumptions in the aggregate be "reasonably related to the experience of the plan and to reasonable expectations." Past experience, therefore, is a major factor, but not necessarily the only one, to be considered by the actuary in supporting his best estimate of anticipated experience under a plan. In setting all of

his assumptions, the actuary must be ever mindful of his duty of undivided loyalty to the plan participants.

Under the act, plan assets are to be valued on the basis of any reasonable actuarial method of valuation which takes into account fair market value and which is permitted under regulations prescribed by the secretary of the Treasury. A question has been raised as to whether the actuarial value of plan assets may exceed the market value of the fund. The act generally recognizes the long-term nature of pension plan funding and in this regard permits the use of actuarial valuation methods which produce asset values that are lower than market value in some years and greater than market value in other years. The actuarial value of the assets must bear a reasonable relationship to fair market value. If the fair market value and the value used under the actuarial method differ significantly over several years, then the asset value under the plan must be adjusted accordingly.

Appropriately, Robert B. Mitchell, in his recent release *From Actuarius to Actuary*, has a major chapter entitled "A Time of Challenge and Opportunity." This certainly should be the charge to be taken up by actuaries and all others concerned in the employee benefit field. Within only a few months plans will have to be brought into compliance with extensive reporting and disclosure requirements. The other panelists have pointed out that these requirements and those under the eligibility and vesting standards impose substantial record-keeping burdens on plans and plan sponsors. Obviously some "creative" administrative ability may be needed to bring plans into compliance. However, it should be pointed out that many of the seeming complexities of the law can be overcome through simplified procedures which, instead of following the letter of the law, go a half-step beyond in favor of the plan participants.

The act is, however, responsive to these potential problems. The secretary of labor is given broad authority to exempt welfare plans from some or all of the reporting and disclosure requirements of the act. The secretary may prescribe alternate methods of compliance for pension plans in the areas of reporting, disclosure, and vesting. The number of variations, exemptions, and delays under the act is extensive. Relief is but a "petition" away, so to speak.

The unique problems suffered by multiemployer plans are also specifically recognized under the act. Most of the disclosure and record-keeping requirements applicable to these plans are to be delayed until the agencies have had a chance to review their problems and deal fairly with them through regulation.

It should be remembered that to some extent certain reporting and other legal requirements have been eliminated by the act. The states have been completely pre-empted from regulating any employee welfare or pension benefit plan. The new act in effect provides for one-stop shopping as far as the regulation of all private benefit plans is concerned. Although it may not be accomplished immediately, it is expected that the various requirements with respect to reporting to the IRS and to the Department of Labor will be coordinated and combined, thereby reducing the burden of plan administrators.

Plan sponsors and others stand to benefit substantially from the act in that there will be more centralized administrative decision-making. A new Office of Employee Plans and Exempt Organizations has been established within the IRS and is to be headed by an assistant commissioner. The IRS and the Department of Labor are directed to coordinate their activities in order to reduce the burden of compliance. The intent is for the national offices to bring about more uniformity in policy determination and interpretation of the law.

In conclusion, let me stress that this pension "bill of rights" can be meaningful only to the extent to which we as professionals (and plan sponsors) make it meaningful. There are new responsibilities and, to be sure, they are major ones. I am certain that those of you who champion the private pension system as an alternative to government dependence will grasp these new responsibilities as a challenge to better provide for worker retirement security through private initiative and investment.

MR. JAMES S. RUBIE, JR.: I would like to offer my opinion as to the possibility of using the aggregate or frozen initial liability methods after the new minimum funding standards become effective. I believe that the regulations will permit these methods, and I base my opinion on footnote 5 of the House Ways and Means Committee general explanation dealing with experience gains and losses, which states: "However, the bill provides that experience gains and losses are to be determined under the funding method used to determine costs under the plan. It is understood that some funding methods, such as the 'aggregate method,' do not provide experience gains or losses, but differences between anticipated and actual experience are subsumed in the basic funding requirements of the method. If a plan were to use such a funding method, it is anticipated that the plan would not need to separately amortize experience gains or losses." This footnote seems to express the clear intent of Congress, which the regulation writers should take into account. The footnote specifically mentions the aggregate method, but I believe that the principle extends to the frozen initial liability method.

MR. GORDON V. BAYLEY:* I have one observation and one question. The observation is on something that Mr. Blatchford told us about, namely, the position of the insurance company pension actuary and the considerable difficulties you have had in arriving at a formula procedure by which he can report. It may be of interest to you members to note that, in the United Kingdom, we recently have revised our code of professional conduct to suit current conditions in our country. I think that our solutions are known to your own professional guidance committee. The central principle is that the insurance company actuary is totally responsible to his principal, that is, his employer. The employer, in turn—that is, the insurance company—can then make available his advice to the ultimate client. This has a number of consequences: the position of the actuary with the insurance company must be clearly stated in his actuarial opinion and his report, which can in due course be passed on to the ultimate client.

Now, my question. We have been very much impressed with the elaborate legislation that you have introduced to cover disclosure, vesting, supervision, and so on. We are now going through a similar process, we already have half this legislation, and there is a lot more to come. I would be very much interested in the panel's views as to the extent to which the introduction of this legislation will cause pension plans to terminate where their present level of funding is below standard. Second, will the new legislation have any inhibiting effect on employers in raising the standards of the pension plans, in light of the additional funding requirements they will be subjected to?

MR. BOYNTON: My personal view is that, after a possible initial surge of terminations to take advantage of certain features of the law, there will not be a dramatic increase in the number of plans terminating. Yes, some plans are going to terminate, but they will be mostly marginal plans. There should not be a serious problem, however, among large employers. Bear in mind that for a responsible, well-run company that plans to continue in the future, it is pretty well accepted now that the retirement plan is part of the package that they must have for employees. If there is to be a pension plan, it must be funded and comply with the act. The result of this is that some marginal plans will terminate.

The other part of the question perhaps can be rephrased as a question of defined benefit plans versus defined contribution plans. I think that among small employers there will be a greater tendency toward defined

* Mr. Bayley, not a member of the Society, is a Fellow and President of the Institute of Actuaries. He is a member of the Occupational Pensions Board, England.

contribution plans. However, I do not think the act really changes any of the fundamental reasons why you choose a defined benefit plan instead of a defined contribution plan. You can update for inflation and you can give past-service credits and all those other features which you cannot do with a defined contribution plan. I really do not think that when employers sit back and realize what the act is doing there will be as large an impact as many would have us believe. There is no question that it has some impact—it has to—but I do not see a complete swing away from defined benefit plans.

CHAIRMAN BASSETT: I agree with Ed, in that I do not anticipate that very many plans will terminate. There are some currently unfunded plans that can no longer exist unless they fund. A few of these may have to be significantly changed. On the second question—whether with the increase in costs for funding, vesting, administration, and so forth, benefits are going to be decreased—prospectively, I think they will be, but I do not believe the decreases will be significant. It is a matter of timing. Maybe some of the improvements we thought we were going to make next year will be deferred a few years. Again, it is for the long-range good, as Russ Mueller has pointed out. The act will make our system more secure and sound, and I think we have blunted the attack of those who wanted to get rid of the private pension system and substitute a government program. There will be some adjustments, as Russ has indicated, but I think that in the long run the legislation will have a positive effect.

# REGISTERED EQUITY PRODUCTS, INCLUDING VARIABLE LIFE INSURANCE, VARIABLE ANNUITIES, AND MUTUAL FUNDS

1. Growth of variable annuity premiums in the United States.
2. Experience of mutual funds organized by life insurance companies or distributed by broker-dealer subsidiaries.
3. Actual experience with similar coverages in Canada and Great Britain.
4. What experiences on these coverages are pertinent in consideration for variable life insurance?
5. What current regulatory and technical developments affect variable annuities? variable life?
6. What considerations as to disclosure, suitability, and so on, are involved?

CHAIRMAN RICHARD P. PETERSON: When the life insurance industry decided to compete in the individual investment market by organizing and registering various equity products, including variable annuities and mutual funds, it found itself in an arena with its prior competition—a situation somewhat in the nature of "we have joined our enemies and they are us." The Securities and Exchange Commission made it quite clear that the life industry made the choice to join and enter the arena and not the other way around.

In past years United States insurance companies have sold individual insurance policies emphasizing investment aspects, as a savings vehicle, as insurance but with emphasis on retirement options, as mortgage or specialized coverage, as financed insurance with emphasis on tax aspects, as minimum premium with a loan agreement where the annual renewal billing might be renewal premium, less any applicable dividend, less annual increase in loan value (generally 94 or 95 per cent of increase in cash value), plus the annual loan interest. Variable life's basic concept was a reasonable method for reflecting current investment experience (based on market values and experience of the appropriate assets) on an insured group of individuals. If only equity investments had been used, any basic guaranteed minimums may have been controlling elements during recent years.

The insurance industry may be facing some interesting questions if equity values remain down at next annual statement time, especially where the mandatory securities valuation reserve may have already performed its maximum smoothing process. For some companies that

may have been facing questions about equity among classes of business where investment performance is concerned, the matter of using market values for some assets may become enlightening. Separate accounts, of course, receive separate consideration, since they are valued generally on a daily or weekly basis. Mutual funds are separate corporations, valued on a daily market value basis.

This is a time when securities prices in the United States and many other countries have receded to their lowest points, going back more than a decade; while inflation has continued to increase, interest rates continue on the high side and other major problems continue to plague governmental bodies. These elements have not been helpful or conducive to positive developments in the recent past in the equity areas, whether the subject is mutual funds, variable annuities, variable life, real estate investment trusts, separate accounts, or other types of products involving governmental registration.

This has been an extremely difficult year for the United States, for most other countries, and for the economies of all; and the adverse conditions have directly affected United States industries. This affects values of equity investments, and the extraordinary inflation and level of interest rates have had a devastating impact. In current distribution of mutual funds, it appears questionable whether the investment should be sold as a possible hedge against inflation. Homeownership in a desirable location may have been one of the better hedges against inflation available for an average person, and there are many tax concessions that encourage homeownership. Life insurance was and is the primary business for many life companies, and although the investment element in permanent forms of insurance has been questioned increasingly from cost and results viewpoints, there are still some important considerations favoring insurance. Thus equity products generally were developed as a supplement to basic fixed-dollar products, rather than as a primary product, and as a means for insurance companies of diversifying in the product area, especially where investment elements are basic or major factors.

To finance some of the requirements of homeownership, there are over five thousand savings and loan companies (the majority are mutuals) in the United States with combined assets around $275 billion, and about five hundred savings banks (mutuals) with combined assets over $100 billion. Disintermediation occurred in both savings and loan companies and savings banks in the last year, but flow generally was into bonds or other types of debt instruments rather than into equity securities. Any disintermediation in the life insurance industry, from policy loans or otherwise, did not flow into mutual funds, with the possible exception of money management

types of short-period investment. There is a current confrontation between the banking and securities industries which raises the question whether the securities industry can continue to meet projected demands for equity and long-term debt capital, and this involves separation from and legal protection from competition like commercial banks. These are some of the competing elements in the investment arena.

The procedures required for distribution of registered products caused many companies to organize operating subsidiary organizations, a relatively new experience for many of them. It will be reasonably successful for some over a period of time, necessary for some others in spite of the level of basic cost elements involved, and questionable for some because of the recent adverse conditions and the delay in developing additional products. Predictions or assumptions made in the past probably have not become reality for many. However, some good basic foundations have been set for reasonable operations in this area in the future. If insurance organizations, subsidiaries, or affiliates remain interested in all investment areas, the equity operation should be an essential element in the future. This includes companies interested in administration of pension, profit-sharing, and other retirement plans. As an example, for the self-employed in the United States mutual funds probably have been first in the sale of H.R. 10 plans, life insurance second, banks third, savings and loans fourth, and government bonds fifth. The Employee Retirement Income Security Act of 1974 provides tax incentives for retirement savings by certain groups. It is interesting that federal regulatory provisions pre-empt state laws in areas of fiduciary standards, rules of conduct, and disclosure and reporting requirements. It is also interesting that actuaries will have some fiduciary responsibilities and will have to meet specified standards.

Although there have been many problems in the development of equity products, most issuers, distributors, and investment advisers have been able to comply with basic requirements of the various regulators, including the SEC, state securities departments, and state insurance departments, with respect to variable annuities and the like. Most distributors have been able to work within the National Association of Securities Dealers rules, regulations, and policies, including the possibilities of compliance problems. There have been some complications because the Investment Company Act of 1940, as amended by the 1970 act, does not readily allow what could be desirable future developments, but some of this basically involves conflicts or lack of agreement on basic points between state and federal regulators. Variable life insurance is an example in this area. Most distributors have been able to work under the require-

ments of the Securities Exchange Act of 1934, and technically it is not difficult to comply with the requirements of the Securities Act of 1933. Also, technically it is not difficult for investment advisers to comply with the Investment Advisers Act of 1940. The filings required are extensive, detailed, may overemphasize what could be considered relatively minor points, and use up tremendous amounts of paper. What seems to be important to regulators one year may become relatively insignificant in a following year, yet additions continue with few deletions. The doubling up in required filings, caused by exhibits or otherwise, is astounding. The only solution probably will be use of means other than paper for transmitting information in the future.

In the registered product area, since confirmations of purchases are made promptly and a prospectus providing full disclosure is provided, the element of proper sale has not been a significant problem. Perhaps the basic problem has been inability to obtain sufficient sales.

It is doubtful whether the concept of full disclosure is a major deterrent to selling efforts, even on variable annuities. Those connected with life insurance operations faced the dilemma of the mutual fund conflict between arguments for no sales charge and payment of an adequate commission percentage. However, the problem of a sales charge probably has been overemphasized, since prices of a mutual fund share, for example, have varied more than sales charges within periods as short as one week. In any event, the shareholder receives a confirmation which fully discloses price and sales charge, and there have been relatively few incidents in recent years where sales integrity could be subject to pertinent questions.

The current corporate and financial complexities (some of which may be intermixed with current world conditions) reflected in market values have emphasized the importance of investment performance. This is not limited to the subjects under consideration, since they are only products in the financial market. However, their performance is illustrated on a daily market value basis, and detailed reports are furnished to customers on a regular basis, generally semiannually. Customers receive additional information when distributions are made, monthly confirmations when systematic investment is involved, tax information, and the like. All of these contain reminders of performance, which may be positive or negative from a sales standpoint.

Redemptions on an annual basis of open-end mutual funds on the average do not vary much from 10 per cent of average net assets. From an investment management standpoint, where an annual charge such as $\frac{1}{2}$ per cent of average net assets may be made, a reduction in net assets

caused by a decrease in market values may be very significant from the investment manager's viewpoint. A decrease from $50 billion to $35 billion open-end net assets in one year results in about a 15 per cent drop in management fees. This affects a manager's income in a proportionate amount. A distributor's income is hurt from reduction in sales, and the manager is adversely affected by decrease in management fees. This combination has been tough enough to handle but is made worse by increases in registration fees, filing costs, mailing costs, administrative expenses, printing and paper costs, auditor's charges, and other items affected by inflationary times. The manager's net income can be reduced further by a typical management guarantee that expenses charged against fund assets on an annual basis will not exceed a percentage of average net assets.

Personally, I plan to continue optimistically on a realistic basis about the United States and its ability to maintain basic financial structures, even though the competitive elements undoubtedly will require adjustments occasioned by world conditions, whether inflation, oil crisis, production, or distribution problems. Investment (from savings) is still essential to provide the necessary growth in basic housing, building, food, and essential products for an increasing population. The equity operation requires complete integrity, sane judgment, competence, lots of humility, and patience or ingenuity.

The members of this panel should take the usual SEC attitude that comments are our own viewpoints and may not necessarily represent the viewpoints of the various companies or federal or state entities with which we may be involved. There are conflicts of interest whenever investments are competing for the same dollars, commodities, resources, or anything else. There can be conflicts of interest whenever countries, companies, federal or state agencies, or other entities are in competition.

MR. ROBERT H. JORDAN: Although a few companies entered the mutual fund business in the early 1950's, the great majority did so in the years 1967–70. In these remarks I will confine my attention to the experiences of the majority who have entered the mutual fund business in recent years, primarily companies whose parent companies are oriented toward life insurance. These comments concentrate on lessons that have been learned; hence the subjects discussed are mainly problem areas. They fall into three main categories: the sales area, the home office management-marketing area, and the securities area.

### I. THE SALES AREA

*Without sales there is nothing.*—Typically, the mutual funds founded by insurance companies have been seeded with an initial investment of $1 million or less. This is a very small amount from a mutual fund standpoint and so, on its own, can contribute little toward the gross income of the sponsoring management-distribution company(ies). The production of successful financial results by the sponsoring organization is contingent on having adequate assets to manage. Since there are no other kinds of operation, the entire impetus toward a successful operation is necessarily aimed at the generation of sales. If the assets under management do not grow quickly, that is, if sales are not generated, the operation is looked upon as being less than valueless.

*Sales do not occur spontaneously.*—There is hardly one of the companies studied for which the early projections of sales were close to the actual experience. The "optimism," if that is the proper expression, used in the generation of early forecasts was based on the size of the sales force selling individual life insurance; it seemed logical to expect that, using a consumer product such as mutual funds, these sales forces would be able to generate a reasonable volume rather quickly. It is possible that the results are caused by the fact that mutual funds are attractive to an older market or that different selling techniques are involved.

However, I feel it is adequately explained by the statement, "No promotion, no sales." In general, it seems fair to say that any new product with reasonable profit margins introduced to an insurance company sales organization will require heavy promotional efforts and substantial continuing support efforts to assist in the generation of sales. While it is possible that at some future date mutual fund sales will be self-generating to some degree, that day does not seem to have been reached by any of the operations started in 1967 and later. Heavy promotional and educational efforts are still needed to produce volumes of business that are reasonable in terms of the overhead necessarily incurred by organizations of this type. However, it is a rare case, indeed, where there has been heavy promotion of mutual fund sales.

*Deep penetration of the field force will take a long time.*—It also seemed reasonable to expect that the introduction of a consumer product to salesmen already selling consumer products would result in a considerable proportion of that field force making use of the new product. This seemed particularly likely when account was taken of the ability of mutual funds to add the possibility of growth to an asset accumulation program, and when the product was introduced after a long period of rising stock prices. Most companies found that, by mounting a special effort and

incurring substantial costs, they were able to obtain a deep penetration of the field force in terms of salesmen fully licensed to make sales. However, penetration of that body of registered salesmen in terms of sales activity has been quite another matter. It is not unusual for less than 20 per cent of the registered field force to open any new accounts during any three-month period; during the full year it is rare for more than 50 per cent of the registered salesmen to have generated any new accounts. Since five years or so have passed, and a substantial number of those who are registered have failed to make sales and there are still some members of the field force who have failed to become registered as mutual fund salesmen, it looks as though it will be a long time before this new product is being used with any regularity by most members of the active field force.

*Integration of fund and life sales activity is rare.*—Here too, original expectations have not been realized. While the suggestion often is made to salesmen that a simple reference to mutual funds be made whenever they are visiting clients and prospects, the impact of this suggestion probably has been very small. That the impact is small is obvious from the small number of registered salesmen making sales and in the total new-account activity of insurance affiliates. While there are certain salesmen who have done an excellent job of carrying the use of mutual funds into their daily activity as life insurance salesmen and as financial planners, an overwhelmingly greater number of salesmen do not do this.

*It helps if the field force is heavy in the small pension and H.R. 10 fields.*—In sales of this type, it is common for the major portion of the deposits to the plan to be thought of as for accumulation. Therefore, it is natural for salesmen selling such plans to gravitate to "investment" vehicles for the accumulation of the assets. Mutual funds fill the bill quite well and are used in a great number of such plans. Companies that traditionally have done a substantial amount of their individual life business in the pension and/or H.R. 10 fields have written the most substantial volumes of mutual fund business (substantial by insurance company affiliate standards). Also, they have the potential for continually increasing their business because of the continuing nature of the funding of plans once established. In such companies sales made for personal purposes are relatively small.

*"Financial planning" means "sell life insurance."*—Over the past few years many interesting statements quoted in the press have suggested that the financial planning millennium is at hand for the private individual, since a complete job will be done for him by his financial planning service representative. I believe there is no individual more suited for

undertaking this complete financial planning job, certainly the long-term aspects of it, than a life insurance agent. This view is based on the substantial amount of training in financial planning provided to life insurance agents and on the aggressive nature of their sales activity. Since they must seek out their clients and create sales, it is logical for them to be motivated to increase the size of a sale to cover as many areas of financial planning as possible. This is a very interesting concept which does not seem to have worked out in practice, or at least not very often.

In any event, it has been observed that the use of mutual funds as an element of an over-all financial planning process has not been great. This may reflect the fact that the addition of a new product is, of itself, very difficult. I suspect, however, that it is a reflection of the fact that sophisticated financial planning is rare.

*Our control of policy proceeds is weak.*—Any life insurance company that formed an affiliate to merchandise mutual funds must have expected to obtain as mutual fund investments a substantial part of the flow of money out of the parent company in benefit payments, such as death claims, maturities, and the like. In my own company, each year we make death claim payments through the ordinary branch of about $25 million; ordinary dividends paid in cash or left to accumulate amount to about $10 million; and we pay maturity benefits of about $10 million. In addition to this, we have in existence a dividend accumulation account of roughly $70 million. Against these figures, our mutual fund sales have been around $5 million in each of the last three years. Our studies indicate that, of the roughly $50 million per year that flows out of the company in benefit payments, not more than $2 million of these proceeds has been used for this purpose. It is almost with a sense of shock that this relationship, and the minimal impact of our efforts to direct these benefit payments into fund investments, are observed. We are confident that a substantial part of these payments are not spent but are invested elsewhere.

It is to be hoped that as the years move along we will find better ways to effect contact between the company and its clients to alert them to all the service possibilities through the sponsoring company and to provide the clients (or their beneficiaries) with continuing financial service when a benefit is paid.

### II. THE HOME OFFICE MANAGEMENT-MARKETING AREA

*It helps if management of the "life branch" is committed to the operation.*—It may seem odd to raise this subject, because it would seem that management has committed itself heavily by having established the operation.

However, one of the comments heard most frequently from the personnel of such affiliates is that the operation of the affiliate is, let us say, ignored by management. In fact, those areas of support which appear to have the most chance of being helpful to the success of the operation are looked upon with the most disfavor by the management of a life operation. To illustrate, mutual fund distributors in these circumstances think that dividend accumulations are a choice area for "transfer" investments. However, relatively few insurance company managements have been enthusiastic at the prospect of vigorous exploitation of this market. The usual reaction is to display concern that accumulations would be subject to attack. I certainly do not want to give the impression that it would be desirable for all assets supporting life insurance contracts, cash values, dividend accumulations, and so on, to be stripped out. However, a consistently negative attitude about working some of these areas, where the generation of business is difficult at best, is negative to other sales efforts.

Also, on occasion management should carry across its desire for successful results in a forceful fashion. For example, failure to carry the message to field management, in diplomatic but nonetheless effective fashion, of the desire for reasonable mutual fund sales is an indicator of nonsupport in the eyes of such field management, which then can proceed to ignore this portion of the operation.

This subject is probably one of the most subtle of all that we have to deal with, and the recognition of this nonsupport by members of the field sales organization is most pernicious. While good management technique indicates that the best results are obtained by gentle persuasion, that persuasion is most effective when it clearly has the support of, and is occasionally provided by, management of the company.

*The agency force is the market.*—This is a lesson that had been learned over and over again by life insurance companies in the marketing of life insurance. An examination of the advertising programs and promotional efforts of most life insurance companies would reveal that their efforts are usually aimed not at the general public but at their sales forces. If it is possible to develop a favorable response and attitude on the part of the field force toward a product or a product line, then that field force will be motivated to use the product with its market, the general public. Therefore, it is important to recognize that the individual members of that field force are, in a manner of speaking, customers. They need to be complimented on their successful efforts, their concerns must be satisfied, and they must be educated to an understanding of what they are dealing with and to an appreciation of its value to themselves and to their clients.

*Developing product knowledge and confidence takes time.*—Members of the field forces of companies studied generally responded quite well to the educational effort involved in becoming licensed. However, they seem not to have responded very well to the other educational materials made available to them—those designed to make them effective salesmen of the product. The major issue here must be motivation, as it almost always is. Still, I must admit an inability to understand why an agent will go through the arduous process of becoming licensed, with one or two difficult exams to be passed, and then fail to take the next step, which is to prepare himself to market the product. This is a common experience of virtually all insurance company subsidiaries. Perhaps the solution to the problem is merely to let time pass and eventually this subject will become an ordinary part of the training of all new agents. It should be recognized, however, that this is only a "perhaps," because there are hardly any companies that have integrated mutual fund training into the training of their new life agents. It appears that there will be a significant period of time before our agency forces do have adequate product knowledge and confidence in the product.

*It helps to have a broad product line.*—Even during this short period of five years, there have been two substantial shifts in the "style" of fund attracting the most attention. When life insurance companies first went into this business, it was the year of the "go-go" fund. The funds generating the largest amount of sales had capital appreciation as their major investment objective; their investment techniques were certain to result in volatility in the investment results. With the substantial drop in the market that was encountered in 1969 and through the early part of 1970, a movement toward more conservative investment vehicles arose, with a greater portion of sales going into funds that invest primarily in long-term bonds. These are certainly conservative vehicles in comparison with "go-go" funds, but they do involve some risk of variation in the value of the assets as interest rates change.

In recent months still another style has emerged in the form of "money market" funds. These funds invest only in money market instruments, typically with a maturity date of from thirty to sixty days. They are very attractive at the present time because they offer substantial yields and considerable stability of principal. So we have seen a shift in investing "style" twice in a fairly short period of time.

In order to maintain sales activity, a product line covering a broad range of investment objectives is needed, so that whatever the style may be, the need may be met. Organizations that felt they did not have to

satisfy the public desire for a variety of funds have seen their sales drastically affected by the change in style.

If one were to examine the ordinary portfolio of the parent company of any of the insurance affiliates involved, one would find a wide range of products from, say, one-year renewable term to ten-year endowment. Why management offering so broad a product line for ordinary business would feel that a limited product line in mutual fund was satisfactory is a question. I feel sure that, as time passes, product offerings will be broadened in one way or another to satisfy the diverse needs that exist.

*Mutual fund sales leaders seem to be a random sample of the agency force.*—Although the number of studies available is not large, the information developed so far suggests that the only uniting characteristic of mutual fund sales leaders is their determination to become active in the mutual fund field. Successful insurance company mutual fund salesmen have been young and old, inexperienced and experienced, in the leader's club and out of it, and specializing in personal business and in corporate business—all in roughly the same proportions as these agents exist in the parent company's agency force. This is another of the lessons we have learned which I, for one, find surprising; it certainly is not in agreement with preconceived notions which were expressed to me by many of my associates and by my associates in other companies.

*Marketing schemes are rare animals.*—In most cases mutual funds have been made available to the insurance agency force as just another product. The market in which mutual funds traditionally have been sold, that is, average age 45, is considerably different from the market in which life insurance conventionally is sold, average age 33 or so. Although that is a very considerable difference, it does not seem to have resulted in sophisticated and aggressive marketing plans to attack this new area of operation. A few companies have introduced packages of material for use in connection with payment of death proceeds to widows; these could not be described as aggressive marketing programs, but they do have the seeds of a possible marketing plan. There are other areas in which mutual fund sales seem to have great potential, but there is no evidence of aggressive marketing plans being put together and effected to exploit them. I think it is fair to say that a new marketing scheme requires an important change in approach on the part of the sales organization and that the desire to stick with the status quo is very strong and mitigates against the exploration of such new schemes. Although we do know that a few companies are very much marketing-oriented, it is hard to uncover evidence of any real new approaches to specific markets with the idea of generating substantial mutual fund sales in these areas.

III. THE SECURITIES AREA

*"Super" investment performance is interesting but of no great importance.*—There have been several instances in which an unusually good investment performance in an "up" market was recorded by an insurance company–organized mutual fund and resulted in substantial sales in the following calendar year. Where there has been a substantial increase in sales following "super" performance, sales have invariably dropped back to the former level, more consistent with the basic production capabilities of the sales force involved, and, in some cases, have dropped below that level. When the increase in sales occurs, there is considerable jubilation. The drop in sales which follows, reflecting normal or below-investment performance, is sometimes very difficult to accept, particularly if marketing plans have been developed during the period of euphoria.

A down-to-earth attitude suggests that the real objective of investment management of a growth fund is to obtain investment results consistently better than the median. If such results can be achieved, then the accumulated long-term results of these marginally better year-by-year results will generate a truly satisfying and superior result. Reasonable long-term results are what insurance company subsidiaries' sales programs stress, since we are attempting to develop long-term asset accumulation programs.

*Poor investment performance is important.*—Although it is possible to generate temporary sales increases from "super" investment performance, poor investment performance seems to produce a long-term impact in the form of lower sales. If in most years investment management achieves only average performance on a year-by-year basis and performs poorly in the other years, it is difficult to overcome the year(s) of poor performance, since there are too many competitors not suffering the same problem.

*Regulatory problems are not as serious as we anticipated.*—Because of lack of familiarity with the business, most insurance company managements worried considerably about the impact of the new regulatory environment on their back office and sales procedures. Extremely conservative approaches to the satisfaction of regulatory requirements were adopted. In many cases this conservatism was unrealistic in terms of everyday business practice in the securities business and had a significant negative impact on the members of the sales force. In most cases the registered representatives are almost all full-time agents of the current company and are very concerned about maintaining the good image of their company. Also, their area of activity in the securities business is highly restricted compared with that of the typical registered representa-

tive in the securities business. Hence there have been very few instances of sanctions imposed for failure to comply with regulatory requirements, and these have been mainly cases of technical failings rather than of fraud or serious impropriety. Our early emphasis on the dire consequences of failure to meet requirements may have been necessary, but its negative affects have been considerable.

### IV. ANOTHER VIEW

*"Lessons" really are learned by mutual fund affiliates, not by parent companies.*—The lessons discussed here are really those learned by the staffs of the subsidiaries, and only to a limited extent are they appreciated by parent company management. Probably some of what has been learned, bearing as it does on the life sales operation, flies in the face of what parent company staff members believe to be true.

*A few lessons have been learned by parent insurance companies.*—The quality of these lessons differs in character from those already mentioned, since these have to do primarily with the relationships between the parent and the subsidiaries, and with over-all results. A few examples are the following:

1. Early forecasts of sales and financial results are hard to realize.
2. Putting the product "on the shelf" is not enough.
3. Fund operations do not impede life sales activity.
4. Subsidiaries want a disproportionate amount of attention.

### V. CONCLUSION

I have discussed what seems to be a large number of problem areas, as is to be expected in a discussion of "lessons learned." I do not feel there is any reason to believe that the number of those lessons indicates that we should not have gone into the mutual fund business. In fact, I tend to agree rather strongly with the conclusion reached by John Bragg in his paper that life insurance agents will provide a greater amount of financial planning and assistance in investment areas in the future than has been the case in the past. I am sure that those companies that have gone into the mutual fund business will be important contributors to, and beneficiaries of, that trend. We will come closer to the goal of providing full financial planning to our clients.

None of us who have worked in this area feels that we have yet really exploited the potential for sales that exists in our companies; the horizon for sales and for the development of assets to manage is so considerable as to seem unlimited. However, I believe that the hardest part of the planning-organization-control (POC) management cycle is that part

where the results observed (the "control" part of the cycle) are interpreted into changes to be fed into a new POC cycle. To realize our potential, the interpretation and feedback into the system must take place.

After all this examination, we are left with a challenge, expressed in the following questions: When will we realize the potential of our subsidiary mutual fund operations? Will it be some distant day, by letting the passage of time and accumulating inertia work their magic? Or, more hopefully, will it be soon, by actively employing superior management techniques, by recognizing the significance of what we have learned and actively reflecting that knowledge in improved operations? I am optimistic that events will show that we are proceeding along the latter course.

MR. RICHARD W. PULLEY: The basic argument for variable annuities—their purpose for existing—lies in the ability of common stocks to serve as a hedge against inflation over a long period of time. If a carefully selected and expertly managed portfolio of equity investments can more than compensate over the long term for what we lose in purchasing power due to the ravages of inflation, then the product meets its primary objective. Subsidiary concerns, such as changing standards of living, shorter periods for accumulating postretirement capital needs, and the need for lifetime payments, are all important, but they lose their significance if equity investment cannot cope with the inflation problem.

Comparisons of any broad-based market index with changes in the consumer price index over long periods show that equities can do the job. Furthermore, the experience of TIAA-CREF during the period since 1952, as well as that of other long-standing variable annuity companies, indicates that variable annuities can outperform the inflationary spiral.

The severe stock market decline which began in January of last year has aroused the skeptics once again and raises serious doubts about the over-all effectiveness of these products. Recent articles in the leading financial papers created so much concern in the field as to make this presentation almost a lesson in futility. References to "shrinking benefits," "disenchantment of firms," and "waning enthusiasm" can be very disconcerting to someone who relies heavily on this product to provide a large part of his income during his declining years.

The concerns raised by these articles, as well as other arguments against the efficacy of variable annuities to meet the needs of the public, lose sight of one very important fact. These products were designed for the long term. No one ever expected that they would be very effective for all one-, two-, or five-year periods. A variable annuity must have a long period of time over which to operate. Even a person retiring at age 65

has a life expectancy of some thirteen to seventeen years. We can also assume that the retirement fund will accumulate for at least ten or twenty years. During this time there will be many swings in the stock market. But over the long term, equities have shown an ability to trend upward at an annual rate exceeding the index of prices. Unless the past is no longer a barometer of the future, this should continue to be true.

What about the situation where prices are climbing while the stock market is falling? This is what we have experienced for several years now. Periods of unusually heavy inflation are always bad for the stock market. Hopefully, they can be kept to a minimum, but this phenomenon does create problems. When it occurs right after retirement, the annuitant suffers a reduction of income at the same time that he must pay more for goods and services. Social security benefits, as a retirement base, will help to some extent, since they are now tied to the cost of living. This is not the best answer, but it does provide some help.

What has been the experience of the industry in recent years? Figures taken from the *Fact Book* of the Institute of Life Insurance show an increasing interest in variable annuity contracts. One reason for this is that many companies only recently have begun marketing registered variable annuity products. Another is that the technical nature of the products has made them difficult to understand, resulting in slow acceptance by the salesman and the public alike. Group plans sold to sophisticated employers were the first to find general acceptance. Individual contracts were not far behind, and by 1973 there were almost as many persons covered by individual variable annuity contracts as there were under group variable annuity contracts. In each year since 1969, that gap has narrowed, and it appears that by the end of 1974 more people will be covered by individual contracts than under group contracts, and each will cover more than a half-million persons.

Differences in the degree of sophistication between purchasers of individual and group contracts can be seen in the allocation of premiums between fixed and variable accounts. Since 1973 was a poor year for the market, one would expect to see a big shift in premiums from the variable to the fixed side. For individual contracts, considerations going into fixed accounts increased from 10 per cent of the total in 1972 to 20 per cent of the total in 1973. Under group contracts, however, the swing was far more pronounced—from 35 per cent in 1972 to 58 per cent in 1973. As a result, at the end of 1973, 53 per cent of the reserves held for group contracts was in fixed accounts, as compared to only 16 per cent of the reserves for individual contracts. Another important factor here, of course, is that the generally higher rates of interest payable on the

fixed side of group contracts become more attractive when the stock market is weak.

It is difficult to provide meaningful statistical comparisons between years because of additional companies beginning to market new variable annuity products. The Life Insurance Marketing and Research Association has been compiling quarterly figures on individual variable annuities for several years, and we can obtain some feel for the growing interest shown by their figures. They are based currently on input from thirty-eight reporting companies.

In 1973 these companies showed total considerations received in excess of $425 million. The major part of this was sold under tax-qualified plans, with less than 15 per cent coming in under nonqualified contracts. During the first six months of 1974, this figure grew to almost 19 per cent. It is interesting to note that two-thirds of the nonqualified considerations are on single premium contracts. Much of this arises from existing policyholders who request a variable annuity payout from proceeds accumulated under fixed benefit contracts.

Interest in variable annuity contracts appears to be growing. In the first six months of 1974, considerations were up 14 per cent on tax-qualified contracts and 61 per cent on nonqualified. The latter figure is a good indication that marketing efforts are beginning to reach the general public.

To provide some insight on current activities in the individual variable annuity field, we sent a questionnaire to twenty-eight companies currently marketing these contracts and received twenty-four responses. I would like to share the results of our study with you.

One-half of the companies offer a contract that provides both fixed and variable accumulation and benefits. Many of the other companies permit the companion purchase of a fixed annuity contract and an allocation of premiums between the two contracts. For those companies with combination contracts, current allocations of premiums to the variable account range from a high of almost 92 per cent to a low of 20 per cent. The average for all twelve companies was 47 per cent going into the variable side. This is much lower than the corresponding figure last year. Of the companies issuing "variable only" contracts, slightly over one-half indicated that the availability of this contract has improved the sale of fixed annuity contracts.

## MARKETING

Responses to the marketing questions were rather interesting. For example, fifteen companies indicated that the variable annuity products

have enabled them to move into new marketing fields. Most of them felt that it provided a big boost to their efforts in the tax-sheltered annuity markets, and quite a few are placing heavier concentration on deferred compensation plans, particularly for employees of public institutions.

The marketing responsibility for one-third of the companies is in their ordinary insurance sales division. A like number have set up completely separate marketing units, and the balance have some combination of the two.

The tax-sheltered annuity market (i.e., under sections 403[b] and 501[c][3]) provides the greatest source of business by a wide margin. Presently, it accounts for over 42 per cent of sales. Almost 25 per cent of the business is coming from corporate pension and profit-sharing plans. H.R. 10 plans and sales to nonqualified individuals each account for about 14 per cent, and the remaining 5 per cent is under deferred compensation plans.

Several factors hinder the sale of these products. The main obstacle at least in this limited sample, appears to be the generally lower commission schedule compared with what is paid on other insurance products. Other major impediments seem to be the current stock market conditions and slow acceptance by the field force because of its inability to understand the complexities of the products.

As a result of these problems, slightly more than half the companies have been somewhat disappointed with the sales results. Perhaps it would be more positive to say that almost half are satisfied with the reception the products have received. In any event, the time and money invested in gearing up for this business can be quite substantial. Furthermore, annual registrations, report filings, compliance supervision, and contract administration results in ongoing costs that demand a reasonably high degree of acceptance in the marketplace. Thus far, only a few of the leading companies in the field have been able to achieve this acceptance.

### INVESTMENT PERFORMANCE

The over-all effect of investment performance on the marketing of individual variable annuities is a big question mark at the present time. The newspaper articles mentioned earlier indicate in no uncertain terms that many large group clients have soured on the ability of variable annuities to perform in a satisfactory manner. This is due entirely to the rather unusual economic conditions of the past few years. Certainly the continued growth of premiums paid and new contracts being written is evidence that a large segment of the public is not ready to throw in the towel on this product.

The annual A. S. Hansen report on employee benefit fund investment performance, as reported in the August issue of the *Wiesenberger Marketer*, provides a good analysis of investment performance. In 1973 pension funds invested in common stocks with insurance companies lost an average of 22.1 per cent of their value. It is easy to see how a pension plan trustee can become a little uneasy with results like that. Of course, 1973 was the worst year in the market since 1941, based on the Standard and Poor's 500 stock average, so there is ample reason for the poor performance. Unfortunately, 1974 has not been any better. The average annual investment return on insurance company equity separate accounts for the ten-year period 1964–73 was 4.7 per cent. For shorter periods, the return was much lower.

### DISCLOSURE AND SUITABILITY

With regard to the questions on disclosure and suitability, registered variable annuities fall into the same category as most other securities. The salesman must be registered to sell securities and must have a variable annuity license. The solicitation of business can be made only through a current prospectus and must conform to the SEC statement of policy. The client must understand what he is buying and what he is paying for it. Restrictions on advertising and the use of sales literature have put a damper on sales, but the SEC is beginning to be a little more understanding of the needs in this area. Unfortunately, most companies have spent so much time scaring the daylights out of the field force that many agents refuse to become involved in the equities area.

We still have an obligation to determine that the investment is suitable for the client. Usually, this is satisfied by a short questionnaire on the application form. It has been our experience that only a small number of applications are declined for suitability reasons. Although this method does require some additional time, we have been satisfied with the results to date.

### REGULATORY AND TECHNICAL DEVELOPMENTS

One of the major issues over the years has been the inability of companies to provide sales illustrations similar to those used for other insurance products. Variable annuities are regulated very much as are mutual funds in that sense. As such, the SEC statement of policy limits illustrations to past history for certain time periods. Most companies have not been in business long enough to provide a decent historical picture, particularly in light of recent stock market performance. But this seems to be changing now. The SEC is reviewing the prospect of

permitting illustrative projections. As a matter of fact, they have suggested actually requiring certain projections in variable annuity prospectuses. Three different rates of annual investment performance are being considered—8, 4, and 0 per cent. From the standpoint of the prospective client, this has one distinct advantage. It would enable him to compare the effect of charges made by one company as opposed to another.

When asked whether they felt that illustrative projections in the prospectus would help variable annuity sales, a small majority of the responses in our study replied in the affirmative. However, several respondents were quick to point out that they were opposed to the current SEC proposal.

The SEC is also reviewing the status of investment annuity programs under the federal securities laws. These are contracts issued by a company to provide annuity payments, where the insurance company does not hold the assets. Presumably the annuitant decides where the assets will be managed, and the company receives each year the amounts needed to make the current year's annuity payments plus a margin for expense and mortality guarantees. There appears to be some question as to whether or not the contract is a security or the company and the salesman are acting as investment advisers.

Federal securities regulation of variable annuities is an ongoing affair, as most of you know if you have the good fortune to be involved in the annual filing of registration statements. There is no such thing as a clean filing. There are sufficient changes in the regulations each year, as well as new interpretations resulting from turnover or rethinking of SEC personnel, to keep the lawyers busy.

### A LOOK AT THE FUTURE

In conclusion, I would like to take a brief look at what the future holds for variable annuities. There is no question but that the new pension reform act of 1974 has created a whole new ball game for these and other insurance products. The liberalization of H.R. 10 contribution limits alone creates a huge market. Many self-employed individuals, who in the past have funded their entire pensions through endowment contracts, may welcome the opportunity to provide some balance by investing additional amounts in an equity contract.

The advent of individual retirement accounts, provided by the 1974 act for persons not covered under an existing retirement plan, should signal a flurry of marketing activity not seen in the industry since H.R. 10 plans were first made available more than a decade ago. The

potential is enormous and could be compounded further by small employers who cannot cope with the onerous vesting and reporting restrictions imposed on corporate plans by the new law. The flexibility of most individual variable annuities makes them ideal vehicles for both the H.R. 10 and individual retirement account markets. The companies in our study were almost unanimous in their feeling about this.

One subject on which there was unanimity was with regard to the effect variable life insurance would have on the sale of variable annuities. Everyone agreed that it would not be detrimental. Perhaps they felt that variable life insurance sales would not increase and therefore could not interfere with variable annuities. Unfortunately, that key question was not asked.

Despite all the trials and turmoil the industry has weathered in its pursuit to make variable annuities a viable insurance product, it is perhaps fitting that I conclude on a favorable note. All the companies in our study except one felt that sales of variable annuities would continue to increase over the years ahead; several even suggested they would increase greatly. It is optimism like that which makes the struggle worthwhile.

MR. SIDNEY BENJAMIN:* In the United Kingdom variable life assurance is known as "unit-linked" life assurance or merely "linked" life assurance. Its development was untidy and is not well documented, but over a period of about fifteen years it has grown from being an oddity to being a significant proportion (35 per cent) of the new-business premiums in the life assurance market.[1] It is difficult now to remember that the early discussions at the Institute of Actuaries in London often included arguments against its development on the grounds that it depreciated the value of the currency. Nowadays, a new life office will often start by issuing only linked life policies. Even the major offices which appeared to resist the development of this class of business now issue these policies; at least, they feel obliged to offer them even if they do not push them.

The first unit-linked life assurance contracts issued in the United Kingdom market were endowments. A paper by W. G. Bailey published in the *Journal of the Institute of Actuaries*, Volume LXXXVIII (1962), distinguished several types of contracts which he categorized according

* Mr. Benjamin, not a member of the Society, is a Fellow of the Institute of Actuaries and partner in the consulting actuarial firm of Bacon and Woodrow in London.

[1] Nine per cent of annual premiums and 60 per cent of single premiums.

to the extent and type of guarantee that was implicit in the policy, in relation to interest, mortality, and expenses. I still find Bailey's paper difficult reading, partly, perhaps, because he gives equal emphasis to several examples which in later years did not develop. However, he did distinguish two types of contracts which in later literature came to be known as Type A and Type B. These names were introduced by A. T. Grant and G. A. Kingsnorth in their paper "Unit Trust and Equity-linked Endowment Assurances," published in the *Journal of the Institute of Actuaries*, Volume XCIII (1967), and they have stuck.

At this stage, it may be helpful to American listeners or readers to know that a "unit trust" translated means a "mutual fund" and "equity-linked" refers to "equity stock," which translates into "common stock."

Under both Type A and Type B, the value of the benefits of the policy originally was determined partly by reference to investment in an authorized unit trust.

Under a typical Type A policy a fixed proportion (e.g., 10 per cent of the office premium) is used to cover mortality and expenses, the balance of the premium being invested in an authorized unit trust. On surrender or maturity the policyholder would receive the value of the units plus reinvested dividends. The usual benefit on death was the value of the units purchased to the date of death plus the total premiums which would have been paid from then until maturity; that is, the death benefit was a growing investment plus a decreasing temporary assurance. Bailey described this by saying that the office's guarantees were limited to mortality and expenses.

Type A policies were first issued by life offices which were set up by wholly owned subsidiaries of unit trusts in order to promote the sales of units. All too often the major difference between one country and another in a commercial development can be explained by one single feature of the tax system—in the United Kingdom life assurance premiums attract relief from income tax, whereas no such relief is available on regular subscriptions to unit trusts. Indeed, the effect of the tax relief was such that for most of the regular premium policies the office could demonstrate —and did demonstrate—that the policyholder paid nothing for his death cover. Before April 5, 1968, some tax relief was available on single premium life assurance policies too, and this was an incentive to the development of Type A single premium plans.

Some of the early Type A policies appeared very favorable to the policyholder. Newspaper advertising which included a proposal form was used. Most of the policies sold needed no commission to be paid. The

subsidiary life office purchased units from its parent at a discount, and the expense loadings were clearly arrived at by marginal costing. In some cases the whole of the death cover was reassured.

In fact, the paper by Grant and Kingsnorth showed that the expense loadings for a unit trust, consisting mainly of a 5 per cent spread between bid and offer price, and a running management charge of $\frac{3}{8}$ per cent per annum were roughly equivalent to the expense loadings in a typical endowment policy, although the incidence of the loadings was different across the term of the policy.

However, there were some interesting features from the policyholder's point of view. The lack of commission—indeed, the lack of any front-end loading—meant that the early surrender value looked very good. Also, in the context of the United Kingdom life assurance market, where surrender values are not guaranteed, these policies had a guaranteed surrender value—at least guaranteed as to the number of the units.

I do not know exactly how the change took place, but gradually competition seemed to lead to commission; and close examination of expenses led to front-end loadings. These were expressed in two ways—either directly by reducing the proprtion of the first annual premium which was invested or by imposing a penalty on early surrenders, or by a mixture of both.

Grant and Kingsnorth defined a Category B policy as one where the office retained the dividend income. Typically, an endowment of term $n$ years and nominal sum assured $S$ would deem $S/n$ to be invested each year until maturity. On death the units plus the outstanding balance of the sum assured would be paid. Because the office retained the dividends, the amount deemed invested could appear very high, even exceeding the premium. On the other hand, it was argued that there was a conflict of interests over investment strategy between the office and the policyholder and participating Type B contracts soon appeared.

Some life offices were linking their Type A policies to outside unit trusts but not investing the money in those unit trusts. Traditionally, United Kingdom life offices have, with considerable justification, held themselves out to be as good at choosing investments as anyone else, and they reckoned to beat the unit trust.

To provide additional flexibility, contracts were developed, after about 1965, linked not to units in an authorized unit trust but to an internal fund within the life fund of the office. This gave the office greater control over the investment policy and in the case of Type B policies enabled it to ensure that the required dividend yield assumed in the premium basis would be maintained.

A much later development along this line was a policy where all interest and dividends, after tax, are reinvested in the internal fund, but the office has the power to extract a recurrent management charge from the fund, irrespective of the level of investment income. At this stage, the policy starts to look like a Type A again, but the level of management charge, unlike the $\frac{3}{8}$ per cent per annum of a typical Type A, is chosen to be at least equal to the interest yield built into the premium rate; a typical example might be a management charge of 3 per cent per annum of the fund (perhaps expressed as $\frac{1}{4}$ per cent per month), of which $\frac{1}{2}$ per cent per annum would, in fact, be used to support management expenses but $2\frac{1}{2}$ per cent would be used to support the premium basis. The point about a Type B policy, of course, is that only $A_{x+t:\overline{n-t}|}$ times the nominal amount deemed to be invested need actually be invested, because the required yield in what one may describe as the "currency of the units" will be forthcoming in the future to build $A_{x+t:\overline{n-t}|}$ up to 1 at death or maturity. This latest development insulates the office from an interest guarantee, but the product design remains the same as the earlier Category B designs where there is an interest guarantee.

Since Type A policies are now often linked to an internal fund which is operated on the same lines as a unit trust, it is extremely difficult to determine currently without intensive investigation of a product, when it is linked to an internal fund, whether it is Type A or Type B. Indeed, to a purchaser the typical current product would usually appear to be of Type A. In fact, the replacement of the dividend yield by a fixed charge in the Type B policy also countered the argument that there was an undesirable conflict of interests over investment policy between the office and the policyholder. Actually, even when the charge is fixed, there is still, in the case of a new life office, a somewhat subtle conflict of interests which arises from the United Kingdom tax system. A life office is taxed on its insurance business (as opposed to its annuity business) on interest income, with relief on expenses including commission. If the expenses exceed the interest income, then the unrelieved management expenses are carried forward indefinitely against future investment income. This means that it is to the advantage of a new office to invest in high-yielding stocks; but, of course, this itself might not be the best investment strategy for the policyholders. Incidentally, this tax point explains why the sale of single premium policies in order to build up investment income is so important to a new life office in the United Kingdom.

Recently there has been an extension of the policies offered into a whole life format, although typically the death benefit after the first fifteen years may be only the accumulated value of the units. Because

of the bid/offer spread and the recurring management charge, 105 per cent of each annual premium can be deemed to be invested with dividends reinvested for the policyholder; and, of course, the policyholder receives personal tax relief on his premiums.

Because the traditional United Kingdom commission system calculates initial commission as a percentage, 2 or 2½ per cent, of the sum assured, the agents, especially the direct selling agents, want long-term policies. Unfortunately, the longer the term of the policy, the greater the new-business strain caused by adopting a reasonably cautious interest assumption in the actuarial valuation when the market is highly competitive in premium rates. Currently, the new-business strain on an orthodox nonparticipating whole life policy can be between four and six times one annual premium—and the strain releases only very slowly.

For a new office the elimination of this source of strain through the use of linked policies is virtually a necessity. This leaves the office with an opening strain of between one half and one full annual premium only, so it can cripple itself more slowly—or, perhaps I should say, more slowly per £1 of premium income. This remaining new-business strain arises from the tax fact that the established competitors of the new office are receiving immediate tax relief on their expenses and commission and are reflecting this advantage in correspondingly lower deductions for expenses and correspondingly higher proportions of premiums deemed invested. And, as the actuary has so often been told, the outstanding feature of linked policies is that for the first time in the history of life assurance the man in the street can see the proportion of premiums which is invested—provided, of course, that he allows for differences in the many bid/offer systems used, and allows for barely mentioned roundings up and down, and notices that the regular management charge may be expressed "per month" rather than "per year"; and provided that he discovers whether his policy is Type A or Type B; and provided that he makes allowance for the various deductions on surrender; and provided that he allows for different capital gains tax deductions. A slightly more subtle point which the man in the street might miss is that two policies may both invest 92 per cent of premiums in total, but the incidence of charges may be quite different.

From a count conducted for me by a colleague, it appears that currently 97 companies offer regular premium variable life products. Of these, 28 offer both endowment and whole life assurances, 29 offer whole life only and 40 offer endowment assurance only. However, it is noticeable that the companies which generate the most business are those which offer

only whole life (in 1973 one such company wrote 10 per cent of the new annualized regular premiums on all variable life contracts issued). The contracts on offer may be categorized as follows:

| | |
|---|---|
| Type A linked to unit trusts | 42 |
| Type B nonparticipating | 13 |
| Type B participating | 12 |
| Contracts linked to internal funds (Type A style, but premium formula could be Type B) | 44 |
| Other | 7 |

Life office internal funds are often themselves invested in unit trusts. However, the internal fund has allowed investment outside of common stocks (e.g., in real estate, which became an increasingly attractive investment in the United Kingdom during the 1960's), and thus the assured can choose the kinds of asset by reference to which he wishes the benefits under the policy to be computed.

Despite the fact that there is now no tax relief on the premium of single premium contracts, there is still a substantial demand. Of the 63 contracts currently available, 57 are whole life of Type A, the death benefit being either a multiple of the bid value of the units depending on the age at death (6 contracts) or the greater of a fixed sum and the value of the units (51 contracts). Under the first type, the sum assured on death at age $y$ is calculated merely by dividing, say, 0.125 per cent of the fund (i.e., perhaps a quarter of the management charge) by the mortality rate at age $y$. Under the second type, the valuation strain can be very large because the size of the effective decreasing temporary assurance increases rapidly with a decrease in the assumed future growth rate of the units. Facility for partial surrender is provided by 42 contracts on an annual basis established in advance (e.g., a percentage normally between 4 and 8 per cent of the units allocated). Where single premium policies are issued linked to an internal fund, the life office may recoup its expenses by a management charge (usually 5 per cent plus a rounding adjustment) incorporated in the formula for determining the offer price of a unit, or it may make a straight charge of 5 per cent before investing at the offer price. There is no difference for the body of policyholders as a whole, but for sales purposes it is said that a 5 per cent charge followed by a bid/offer margin looks too unfavorable to an early surrender.

The accompanying tabulation gives the new premiums written on regular and single premium business for 1973 and for the first six months of 1974. The rapid decline in the stock market during 1974 would seem to

explain the reduction in new single premium business. However, new annual premium business appears to be little affected.

| | Year to December 31, 1973 (in Millions) | 6 Months to June 30, 1974 (in Millions) |
|---|---|---|
| New regular premiums.... | £ 42 | £19 |
| New single premiums..... | 347 | 67 |

An interesting illustration of the way in which theory followed practice in the development of linked business in the United Kingdom is the way in which the introduction of capital gains tax on realized investments in the hands of the insurance office was dealt with. The office normally did not have to realize investments in order to pay claims, but it needed to extract a contribution toward the future liability and set up a separate reserve. After a lot of floundering, the solution which has now been adopted almost universally is to reduce the price of the units by, say, one-third of the tax which would be paid currently on the unrealized capital gain inside the portfolio. If this proves to be an incorrect discounting adjustment, then there will be inequity between different generations of policyholders.

There are two other problems which deserve mention. The first is that in the early days many offices did not invest in the units to which the benefits were linked. This left the actuary with an uncomfortable mismatching reserve to find. This situation has changed, and, apart from approximation for administrative convenience, it appears that offices are fully matched.

The second problem is that of giving maturity guarantees in these linked policies. Typically, the premium multiplied by the term would be guaranteed. Where an internal fund is used, the office can adopt an orthodox investment strategy—provided that it does not advertise otherwise—and there is little danger. Technically, however, every surrender value calculated on a unit basis disturbs the matching position of the office.

Where the policies are linked to an external unit trust, the problem of setting proper reserves is a research area. Even supposing that the units follow the market, says the *Financial Times* Actuaries Index, there is no agreement in the United Kingdom on reserving, and most offices avoid the business even if they nominally offer it.

Because of the rapid growth of variable life in the United Kingdom, a

committee (chaired by Sir H. Scott) was appointed by the secretary for trade and industry (whose department is responsible for the supervision of insurance) in February, 1971, to examine the working of United Kingdom legislation with regard to variable life and, in particular, to advise on the protection given to the policyholder.

The main recommendations of a long report related to disclosure of information to the policyholder and disclosure to the Department of Trade. The committee recommended that each potential policyholder be sent a brief statutory notice stating the name of the linking fund and its investment policy, the proportion of premiums invested, the treatment of investment income, the treatment of charges for expenses, the benefits on death, maturity, and surrender, the treatment of capital gains tax, and the existence of any provision for deferring the payment of benefits (if liquidity became a problem) and finally noting that the policyholder had a ten-day cooling-off period in which to retract his proposal. Most offices publish their unit prices in the newspapers. The Scott Committee recommended an annual notice to policyholders as a minimum.

In the United Kingdom the actuary is required to sign an annual certificate stating whether or not, in his opinion, the company's liabilities on its long-term business exceed the amount shown in the balance sheet, and to prepare a valuation report at least every third year. This report and the supporting schedules provide a large proportion of the data on which monitoring by the Department of Trade and the Government Actuary's Department depends.

The Scott committee placed a prime emphasis on the role of the actuary in this field. They said that, although the actuary is often a salaried employee of the life company, he also represents the public's interest. His independence is ensured chiefly by the support of his professional body and, in the last resort, by the Government Actuary's Department.

The committee recommended that the regulations should be tightened to require more frequent actuarial certification for new life offices and also recommended that the actuary should set out in his valuation report the considerations underlying his conclusions on the suitability of the assets to meet the liabilities and particulars of the provision for meeting minimum benefit guarantees. The annual certificates should state that he has had regard to the nature and term of the assets of the life company which are available to meet the liabilities as shown in the balance sheet and to any tax liability on unrealized capital gains.

I would like to devote two minutes to the subject of variable annuities. Variable pension contracts for self-employed earners, or for earners in

nonpensionable employment, have been offered by a number of offices since tax concessions giving relief of tax to the policyholder and to the life office on such business were introduced in 1956. Eighteen offices currently offer these contracts, of which seven permit the payment of both recurrent single premiums (effectively allowing the earner to decide each year how much he wishes to contribute to pension) and regular premiums; six permit the payment of single premiums only; and five permit regular premiums only. Under all but three of the contracts, income is deemed to be reinvested. However, since thirteen of the offices link the benefits to an internal fund, most of the products could in fact be Type B. On death before vesting, all but three offices grant a benefit equal to the bid value of units assigned or a dependent's pension equivalent in value thereto. It is common for the pensioner at vesting to be given a choice as to the form in which he may take his pension (e.g., level pension, pension increasing by a fixed percentage per annum, variable pension). All pensions are taxed under United Kingdom legislation as income from employment.

The accompanying tabulation shows the new variable pension business

| | Year to December 31, 1973 (in Millions) | 6 Months to June 30, 1974 (in Millions) |
|---|---|---|
| Regular premiums | £ 7.6 | £5.1 |
| Single premiums | 10.7 | 7.1 |

written in 1973 and in the first six months of 1974. It would appear that the fall in stock and property values has not affected the growth of variable pension business.

The market for variable annuity (other than pension) business in the United Kingdom is very small because of the tax treatment of purchased annuities. Only six offices offer these contracts.

In conclusion, and to your disappointment, I am not going to try to forecast future sales of unit-linked life assurance in the United Kingdom.

We are now in a position to allow the policyholder at the outset to choose his own level—or relative level—of sum assured; to choose his own premium rate; and to choose the type of portfolio in which the balance of premium will be invested. Whether total flexibility leads to total confusion I do not know, but the most enlightening discussion of the subject which I have read is the discussion on the paper "Analysis of Basic Actuarial Theory for Fixed Premium Variable Benefit Life Insur-

ance" published in TSA, Volume XXI (1969). I assume that my present audience will have no difficulty in obtaining the publication to which I refer.

I have appended a list of useful references.

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CHAIRMAN PETERSON: One important point is that it will be necessary to be able to clearly describe or disclose all elements involved in a registered product involving individual equity, whether called "variable annuity," "variable life," or other names. These elements should include the investment portion, any mortality element, the various expense elements, tax considerations, responsibilities of entities and persons, rights of shareholders or owners or insureds, and many others. Much of this involves actuarial considerations but requires expression in language which can be understood by the consumer.

## LIMITS TO GROWTH

1. To what extent is there a consensus among informed observers regarding the scope and the severity of the "world problématique"?
2. To what extent is there such a consensus regarding the need for radical changes in American socioeconomic priorities, and what is the general nature of these changes?
3. Assuming that such changes are required, through what agencies can they realistically be implemented?
4. What important activities in this area are currently under way?

CHAIRMAN CHARLES BARRY H. WATSON: The problem we are about to discuss is a very serious one, quite probably the most portentous facing society. At least, it is the problem for which a disastrously wrong answer would be truly disastrous. It is a variant on the seamless web question. All parts are interrelated. Population growth is the most obvious part, but its prime risk is as a multiplier of stresses on resources and environment.

The problem is one for the future, and its solution can be approached only through a projection of what the future holds. Actuaries are, by the nature of their profession, accustomed to grappling with the future and the risks it holds. It may well be, then, that actuaries have talents and skills that they can and should bring to this question as actuaries and not merely as concerned citizens.

Opening our discussion will be Mr. Richard Burkart, who was secretary of the Canadian delegation to the 1974 United Nations World Population Conference held in Bucharest, Rumania. Mr. Burkart will describe what the conference did and did not do and will indicate how Canada is facing up to the problem of growth.

MR. RICHARD BURKART:* A brief review of the historical growth, the international differences, and some of the main characteristics of the population factor will provide a necessary framework within which we can view more meaningfully the decisions taken at the recent World Population Conference and relate these results to the world problématique.

Beginning with 300 million people in A.D. 1, the world's population had increased to 800 million by the year 1750. By 1800 this number had

* Mr. Burkart, not a member of the Society, is a member of the Canadian Department of External Affairs.

exceeded 1 billion, by which time Malthus was already predicting that a stationary state was just around the corner. By 1900 it had reached 1.7 billion, and by 1950, 2.5 billion. Today we have a global population of 3.9 billion people with a 2 per cent global growth rate. As recently as twenty-five years ago the growth rate was 1 per cent. About 80 million people will be added to the planet earth this year, or somewhat more than 200,000 per day. Given the dynamics of demographic momentum, we are told by the experts that the global population will be in the 6–7 billion range by the year 2000. If it were possible (although there are many doubters) to reach global replacement rates by the year 2000, this same demographic momentum factor would carry the world population over the 8 billion mark by the year 2050. Some demographers have predicted a final stabilization of the world's population in the 10–15 billion range sometime during the next one hundred to one hundred and fifty years. Perhaps as a final word on the subject, I read recently that in another twelve hundred years, given the present 2 per cent growth rate, the population will in fact outweigh the earth.

During the next fifty years, 90 per cent of the increase in population is predicted to occur in the less-developed countries, the line of demarcation being set at about the $750 per capita income level. Approximately thirty countries in the world have per capita incomes exceeding this figure, excluding the oil-rich countries which do not have most of the nonincome characteristics of this group. A large number of important demographic differences exist between the developing and developed countries. Life expectancy in the former is 50 years, whereas it is 70 in the latter. Infant mortality rates are 2–5 times higher respectively. The population growth rate is 2.5 per cent within the former, whereas it is less than 1 per cent in the latter. These demographic differences are reflected economically, politically, and socially within these two groups.

During the last two hundred years the developed countries (DC's) have experienced a demographic transition in which they underwent a change from high death rates and high birth rates to low death rates and low birth rates. However, because of the demographic momentum factor, another fifty or sixty years will pass before North America reaches a final stabilized zero population growth, given, of course, that our present replacement rates persist. At the end of this period our population will have increased by approximately 40 per cent. There are several inherent dangers in believing that present growth rates will continue to remain low in the DC's. During the Great Depression, for example, many demographers were convinced that the age of replacement level had finally arrived for the DC's. No good reasons existed for believing other-

wise. The postwar baby boom put an embarrassing end to that particular theory. In fact, some experts predict that we may, in the near future, hear a resounding echo of that first boom. Extrapolations based on present growth levels have not enjoyed an enviable past.

The less-developed countries (LDC's) are now in full swing of their demographic transitions. Life expectancies in these countries are increasing rapidly, and it is predicted that they could reach 70 by the year 2000. Mortality rates are still declining rapidly in many regions. Some experts predict that for a number of the largest of the developing countries, for example, India, Bangladesh, Pakistan, Egypt, and perhaps even China, the crest of the population wave may still be coming. Other demographers suggest that over the long term the global rate of increase of population will oscillate within a 1.5 and 2.5 per cent channel.

### WORLD POPULATION YEAR

Nineteen hundred and seventy-four has been designated as World Population Year by the United Nations. As the major event of the year, the World Population Conference was held in Bucharest, Rumania, during the last two weeks of August. The fact that one hundred and thirty-five countries participated, the largest number ever to attend a United Nations Conference, gives some idea of the importance attached to this subject by the world community. For the first time in history a serious effort was made to define the essential political principles and objectives which may orient national governments and the international community in approaching population questions. Previous conferences on this subject had dealt with technical and medical aspects of the problem.

At Bucharest discussion focused on a *draft* World Population Plan of Action which had been the result of two long years of expert group symposiums, research, and extensive negotiations at national, regional, and international levels under the supervision of the United Nations Population Commission. In spite of these elaborate preparations, the Plan of Action was substantially and significantly redrafted at Bucharest during long and often heated debates. This political document, endorsed by consensus in Bucharest (although the Vatican felt constrained for doctrinal reasons to dissociate itself from the document as a whole), reflects broad international agreement on many population issues. The Bucharest conference in effect transformed what in retrospect was a technical draft plan of action into a vital and meaningful political document on population and socioeconomic change.

At Bucharest a great diversity of political views were expressed. The

U.S.S.R. and in effect all the socialist countries continued to expound the long-held first principle of Soviet demography that changes in reproductive processes follow directly from the restructuring of society according to socialist ideology. They opposed such measures as family planning and demographic targets in the Plan of Action. They argued that natural resources would not impose a Malthusian check on their growth rates. The U.S.S.R. has become increasingly concerned with its declining growth rate of population. They see a declining labor force and an aging population as serious impediments to their long-run economic objectives, not to mention their national security. With birth rates hovering presently at the replacement level in the socialist countries, they took a basic anti-Malthusian and pronationalist stance at Bucharest.

China also rejected all neo-Malthusian arguments, ascribing population problems in the world to "imperialism and neo-colonialism." They strongly supported the principle of state sovereignty in the field of population, rejecting unified international regulations as being inappropriate and unfeasible. The Chinese were effective in redrafting the first principle of the Plan of Action to state that man has the potential to master himself and his environment—consequently his future is infinitely bright.

Many of the Latin American countries, such as Peru, Argentina, and Brazil, have official policies to increase significantly the size of their populations. As a consequence they strongly opposed reference in the Plan of Action to policies and programs designed to control their population growth. They rejected quantitative targets for family planning and references to such concepts as "overpopulation." They argued that their carrying capacities were very large in relation to their present populations and rejected the concept of finite natural resources. Brazil in particular argued that the concept of natural resources is constantly changing and that it must be seen in the light of improvements in technology, in effect suggesting that the world's resources are relatively infinite.

The African countries supported much of this reasoning but concentrated more on the health aspects of population problems and the need for increased international assistance. With the exception of Egypt and several other countries, the Africans did not express particular concern with the size of growth rate of their populations. While some wished to increase in size, others were obviously more concerned with rural/urban migration and similar problems.

On the other hand, the Asian countries, comprising the majority of people in the LDC's, generally acknowledged that their population growth rates must be significantly reduced if they are to solve their over-all

development problems. They supported demographic targets, family planning, and various other measures designed to limit and decrease the growth rate of their populations. They were also very interested in increased international assistance to carry out these programs.

The Western countries, including Australia and New Zealand, generally supported the original Plan of Action, with its reference to demographic targets and action programs which could effect a decrease in the rates of growth of population. Together with many other countries, they stressed the importance of human rights and recommended that population be fully integrated into more comprehensive socioeconomic development plans. They emphasized the great importance of improving the status of women and worked to ensure that the Plan of Action reflected the interrelationship among population, natural resources, and the environment.

### THE WORLD PLAN OF ACTION

The World Plan of Action as finally adopted must be regarded as a remarkable success by those familiar with the very disparate and dogmatic views characterizing discussion in the period preceding Bucharest. It will also remain a useful charter on which future population action may be based in part at all levels. Realistically, this is probably all that could be expected at this early stage of political discussion.

The Plan of Action is based on a number of important principles and objectives. The overriding and principal aim of the plan is to improve the general levels of living and the quality of life of all people. In this respect it recognizes man's knowledge and ability to master himself as well as his environment; as a consequence his future can be made infinitely bright. It emphasizes the dignity of the individual and respect for human life. It rejects colonialism and neocolonialism in all its forms. It stresses the interrelationships between population and development, recommending that population policies become constituent elements of socioeconomic policies. It affirms the basic right of couples and individuals to decide freely and responsibly the number and spacing of their children and to have the necessary information and means to do so. It regards the family as the basic unit in society. It acknowledges that women have the right to complete integration in the development process. The Plan of Action further recognizes the great diversity existing within and among different countries. It confirms that an important relationship exists among population, natural resources, and the environment, and it calls on all countries to minimize wasteful consumption. It stresses the importance of international cooperation and action and recommends social and economic reforms to improve living conditions of the underpriviledged. It strives

to be flexible to accommodate expected rapid demographic change, and, finally, its principles and objectives are consistent with the Universal Declaration of Human Rights.

With respect to some of the specific policies and programs, all countries are encouraged first of all to adopt comprehensive population policies to the extent that they feel population factors influence the conditions and level of life of their citizens. A major goal of each society should be the reduction of morbidity and mortality to the maximum feasible extent, particular attention being paid to infant and maternal mortality levels. Comprehensive health and nutrition programs should also be adopted with this end in mind. Although the Plan of Action does not recommend any world family-size norm, it does support programs to enable couples and individuals to determine the size and spacing of their families.

As the basic unit in society, the family must be protected by appropriate legislation relating to marriage, divorce, inheritance, employment, the rights of the child, and so on. Governments should establish appropriate legislation to ensure the full participation of women in the development of their countries on an equal basis with men.

Governments and international organizations should facilitate voluntary international movement. Programs should be adopted to assist migrant workers by eliminating all forms of discrimination. Immigration policies should seek to avoid the "brain-drain" problem. Foreign investors should employ and train local personnel.

Full consideration should be given to the new International Economic Order as adopted at the Sixth Special Session of the United Nations. This program of action recommends steps leading to a reduction in the widening gap in levels of living between the DC's and the LDC's.

All countries should strive for a more rational utilization of natural resources with a minimization of waste.

To support programs and policies such as these, countries must encourage better data collection and analysis with respect to demographic statistics. All countries are urged to conduct a population census between 1975 and 1985.

Finally, it is recommended in the Plan of Action that a monitoring system be established by which this Plan of Action is reviewed biennially beginning in 1977 and, further, that a thorough and comprehensive review and appraisal of progress made toward achieving the goals and recommendations of this Plan of Action should be undertaken every five years by the United Nations system. This review and appraisal exercise would be coordinated closely with that of the International Development Strategy for the Second United Nations Development Decade.

### CANADA'S POSITION

Canada participated actively in the Bucharest discussion and voted in favor of the final Plan of Action. We regard this conference as an over-all success and as an important step toward a better understanding of this important and complex subject.

Canadian preparations for the conference were extensive and included formal consultations at both the public and provincial levels. In addition, at the federal level an ad hoc Interdepartmental Committee on Population, including representatives from eighteen federal departments and agencies, met regularly for a period of eight months to prepare our over-all position.

Although Canada does not have a population policy as such at present, it is expected that an important consequence of our preparations for the conference, aside from the actual results of the conference, will be that much greater consideration will be given in the future to a more rational coordination of our present population-related policies. We have embarked upon a number of demographic studies; for example, in the near future formal consultations will be held at the public and provincial levels on a proposed green paper on immigration.

Internationally, Canada has been a major supporter of population programs, primarily on a multilateral basis. In the future, as was stated in Bucharest, we will give serious consideration to bilateral requests for assistance in this field.

### PERSONAL OBSERVATIONS

In conclusion, I would like to state some of my personal perceptions on the relationship of population and the world problématique. To make a general, over-all remark, I must say that I remain unconvinced that the planet earth is presently poised on a precipice of doom. On balance, I do not agree that things are becoming worse. Also, because the level of our expectations is often the most important measure of success or failure, I do not agree with those who say that things could be a great deal better. Therefore, I would class myself generally as an optimist in these matters and tend to side with the Chinese in agreeing that our future is infinitely bright, although I am not sure that I would use quite those words.

Although I can see many diverse individual problems, including starvation, poverty, pollution, and the like, and I can believe that some of these conditions may well worsen before they improve, I am still inclined to say that things are good and are becoming better.

Perhaps one example of what I mean can be seen by examining the increase in life expectancy levels throughout the world. This is a measure with which all of you are intimately involved in your profession. As a measure of over-all health and well-being, it indicates clearly that a tremendous improvement already has occurred, particularly in the developing countries, and that continued rapid improvement is expected for the future. As I have said, I do not doubt that there will be temporary reversals and much human suffering over the next twenty-five years. However, by extrapolating from the worst situations, we quite naturally become pessimists and doomsayers. This, of course, is often the safest and easiest course to follow. First of all, if you are wrong, nobody is unhappy. Second, if you can successfully convince others that things are very bad and becoming worse, then they will be less inclined to come and ask you for more trade concessions or increased international aid.

The Plan of Action, I believe, takes a positive and optimistic approach to the future of humanity. Although it recognizes that population considerations are very important in the world problématique, it does not suggest that the over-all situation could be improved overnight if we had control of all the demographic levers. It relates population to the need for fundamental economic and social change based on the principles of international justice and equity. It does not endorse radical or revolutionary changes but calls on the goodwill of all nations to work toward specific goals and objectives.

I think that we in North America must guard against a feeling that, if everyone could enjoy our standards of living, the problem would be solved. During the Public Consultation on Population Questions held in Canada this spring, one of the most frequent pleas was that we should clean up our own backyards before going off to the Crusades in the developing countries and trying to change the world.

Man (and woman) is a rational animal and acts in his own best interests as he perceives them. Historically, programs and policies to affect demographic variables have met with very limited success. If developed countries, for example, doubled their aid in this field, it would still only account for a small percentage of the money presently being spent. I do not believe that we can buy a solution. Rather, the world problématique must be approached in a spirit of cooperation and understanding. The developed countries must strive to understand the aspirations and differences of the developing world and with these in mind work toward a brighter future.

DR. NATHAN KEYFITZ:* That grain production continues to vary from year to year according to variations in weather beyond our present capacity to control or even to predict means that we must somehow store the relative excess of the good years to use in the bad years. This is a requirement that dates back at least to biblical times, but it has been forgotten in the past generation because of a fortuitous circumstance—the rapid increase in North American farm productivity, which temporarily outpaced both the exodus from American farms and the needs of the rest of the world. The burden of carrying the store was borne by the American taxpayer incidentally to a policy of farm relief. Now population and demand have caught up, and the surplus is exhausted.

During the expansion of productivity in the United States and other advanced countries, the balance of international grain movement shifted drastically. In the 1930's the less-developed countries shipped a net of over 10 million tons a year to the developed countries; by the beginning of the 1970's the developed countries were shipping over 40 million tons net to the less-developed countries. What finally exhausted the surplus stocks was the 1972 crop failure in the U.S.S.R.; unlike previous shortages, this one did not occasion belt-tightening, for the regime was able to fill its needs cheaply in the United States, in one of the great financial coups of history.

With effectively zero reserves (about 7 per cent of annual production, barely enough to fill the pipelines of commerce), only bumper crops can avoid hunger. The world's population increases by an inexorable 2 per cent per year, and population in the less-developed countries by 2½ per cent. No wonder the question of restoring the lost reserves is in everyone's mind. Next to immediate famine relief, it will undoubtedly be the chief topic of the Rome conference in November. This paper concerns some aspects of the problem of reserves on which I believe actuaries could make a contribution.

### MODEL 1: INITIAL CAPITAL OF A HYPOTHETICAL FOOD BANK

Given the amount of random variation in cereal production, and given also the amount of variation that can be tolerated in available supplies, the amount of reserves that will cushion the variation to the desired level becomes calculable. To this should be added economic considerations: if we could make a one-time purchase of grain from Mars at today's

* Dr. Keyfitz, not a member of the Society, is Andelot Professor of Demography and Sociology, Harvard University Centre for Population Studies, Cambridge, Massachusetts.

terrestrial prices, how much should we buy? Reserves ought to be built up to the point where the hollows in the time curve of supply are filled in—not completely, but to the margin where added cost of shortage is equal to added cost of storage. The cost of storage is by no means negligible; counting interest at current rates and other elements of cost and loss, it may amount to one-fifth of the value of the grain each year. The question then becomes that of how much cushioning the nations of the world want to pay for. Should it be specified that we would like to suffer a famine that kills a substantial number of people no more than one year in five? That sounds heartless, but it would be much better than we are doing during the present decade.

This way of formulating the problem supposes an infinite supply at current prices, so that gathering into storage would not affect the market. The only costs would be interest on the acquisition expenditure at current prices, along with the physical cost of storage. Such a model is inadequate to cope with the present situation.

### MODEL 2: PURCHASING POLICY OVER A DECADE WITH ZERO INITIAL STOCK

To the above statement of the problem we have at least to add that the reserve proposal comes in a bad year, when there is no possibility of setting up any appreciable store. When people talk of reserves in such a year, they mean that it would be highly convenient to have such reserves, and they wish that they were present. The year 1974 is one in which we would draw down the reserve if we had it. A strategy is required that is more subtle than that of the preceding Model 1 and that requires much more persistence through good times as well as bad—in fact, mainly in good times rather than in bad. Given the degree of cushioning specified as limiting famines to one year in five, and given also that we would like to attain this condition in the next decade, how much should be added to storage (or withdrawn) year by year?

If population along with per capita consumption, and hence the total quantity required each year in the future, can be known exactly in advance, and if the expected value and variance of the supply are known, but not the supply in each year, then a correct strategy can be determined. This is a technical problem that could be handled by queuing theory; while it is more difficult than providing against the variations in deaths that were the original business of actuaries, it is clearly solvable and deserves attention. Also determinate is the (smaller) amount of storage that would suffice, if we know in addition the supply of grain one year in advance, two years in advance, and so on.

Would a world or national authority do better than speculators in the private grain trade? It would have to listen to its critics, whereas speculators operate outside public control. Yet this would hamper its work. When it started to buy, it might be told that the time was wrong, that there was no surplus and it was only forcing up prices. It would hear that supplies were at bottom and prices at the top, and unlike speculators it would have to justify its actions. In any field in which there is a real need for reserves, that very need tends to prevent the creation of reserves by any politically responsible authority. Speculators fail to provide an adequate reserve because they discount the future at well over the 20 per cent per year mentioned above; governments in practice are likely to discount the future even more, though for political rather than economic considerations.

For such reasons one cannot be very optimistic about the advent of a world food bank holding ready-to-use grain. I propose instead a way of looking at reserves in depth. This provides for doing the best one can for the immediate shortage, plus bringing forward not one but a series of long-term reserves, work to be undertaken now to ensure that these will be ready when needed. It also requires foresight but, on the other hand, seeks a permanent solution, not a movement from crisis to crises.

But first some features of the food situation.

*Malthus Lives Again*

At the end of the eighteenth century Malthus initiated the study of population with an essay whose first postulate was that "food is necessary for the existence of man," and then went on to show how the amount of food controls the number of people. In the century and three-quarters that have passed since then, ingenious attempts have been made to circumvent the Malthusian ceiling. His argument has been destroyed time and time again. Optimists have adduced a hundred arguments to show that while food supply may well determine population for animals, yet man's powers are such that for him, and for him alone of all species, it is population that determines food supply. All that was needed was settlement of the great areas of uninhabited land to be found in the new continents; extension of cultivation to marginal lands in the old continents; more irrigation, since water is often the limiting factor rather than land; better seed varieties; more industrial input in the form of fertilizer; and better methods of cultivation.

Not only was Malthus attacked by argument, but hundreds of talented scientists worked in more practical ways to prove him wrong, and thousands of county agents, teachers, and administrators tried to get the

results of science into use. Yet Malthus will not go away. Over one hundred and seventy-five years later we still face the problem as he stated it in the first chapter of the first edition of the *Essay*, plus some added complications.

*Random Variation*

For the foreseeable future we will be trying to match two curves, one (population) moving up slowly but inflexibly, the other (food supply) subject to large year-to-year changes, fluctuations unpredictable more than a few weeks ahead. One would hope that at least the mean and variances of the future supplies could be known, and these facts were assumed for the reserve models 1 and 2 above. But even that is not certain.

For the last twenty years I have been keeping a chart of the kind that is used in quality control work, where it is essential to distinguish between random variation and the kind of systematic variation that informs the viewer that the system is changing. Alike in production of ball bearings and in crop variation, it is easy to confuse the two kinds of change. Indonesian officials in 1952 looked forward to the future with optimism: the previous year had required imports of 250,000 tons of rice; the current year required only 100,000 tons. This was thought sufficient evidence of the approach to self-sufficiency, and was extrapolated to show that the following year would require no imports at all. It turned out that the two years in question were part of a minor oscillation on a curve that has continued to show large ups and downs. That every rise is easily mistaken for a trend by anxious watchers makes the food-population problem especially treacherous.

Of course a country need not be autarchic in food or anything else. It could sell metal castings, textiles, or oil, and buy food. But for any large country without substantial natural resources, given the drastic fluctuations of relative prices in the past few years, nutritional security seems to require a substantial degree of self-sufficiency. This regrettable condition could be changed if the United States, the main supplier to world food markets, was in a position to guarantee relative prices for some years ahead. Far from having the degree of control that would enable it to do this, it discusses closing its frontiers to exports in times of shortage, which would smooth out its own price curve at the expense of greater fluctuations in international prices.

One fortunate circumstance that has turned up in the research of D. Gale Johnson is low or zero correlation among countries and continents. The variations in the world supply are apparently small; in considerable

part transfers could thus be substituted for storage. Transfers are less expensive than storage, but they require the cooperation of countries of very different political complexions. On the other hand, some evidence exists of positive correlation between successive years, for instance in India. Positive correlation either in time or in space increases the need for reserves.

So far we have considered a single layer presumed to be immediately available. That is what we need for emergencies. Yet we also need a way of preventing emergencies from arising; we should recognize that the world faces a chronic condition as well as an acute one.

### MODEL 3: SUCCESSIVE TIERS OF RESERVES

From a broader point of view, the world food reserve starts with the bread in the family pantry and goes back to the grain in ports and on ships, to the grain in inland elevators of the producing country, to land not cultivated but quickly cultivable, to the fertilizer that could be manufactured to permit higher yields on existing lands in the coming years, to the research that would provide higher-yielding varieties suited to particular localities in poor countries, to the education and counseling that would make farmers out of peasants. Not one level of reserves, but row on successive row of reserves.

#### *Land*

This needs more study than would be possible or appropriate here. For instance, the most immediately available part of the land component of the reserve system has been the 50 million acres of the United States soil bank; it was located near existing cultivation, so that men and equipment could be brought to its exploitation within months. But by now it has been largely drawn down, with disappointing results. At least some farmers seem to have been obtaining government payments for not cultivating land that was barely if at all cultivable. In the battle of wits between the farmers and the administrators of the soil bank, it now seems that the farmers did not always lose.

Incomparably more important is the unused land of Africa and South America. In contrast to Europe and Asia, these continents are much less than fully cultivated. But this major reserve is not quickly available. Some of the land is in countries that are neglecting agriculture in favor of industry, while their populations are growing fast. By the time they get around to using the land, their own needs may be desperate. The development errors of the 1950's and 1960's are far from eliminated.

*Research*

A longer-term and possibly even larger reserve than unused land is the food that could be produced on existing farms and peasant holdings by applying existing and future research. This reserve has the advantage of being in the heavily populated countries themselves. Rich results can be expected from it, partly because of the lack of research up to now in those countries. D. Gale Johnson tells us the conditions for increase in food production in the developing countries: "a major expansion of agricultural research . . . , adequate supply of modern inputs required to increase yields, incentives sufficient to encourage farmers to make the required adjustments and expansion and improvement of transportation, marketing and processing institutions."

Judging from past experience in getting existing research into use and initiating new research, food from this source will come into existence only after years or decades. It must be regarded as an asset of long maturity.

*Population Growth and the Long Term*

The bringing forward of these reserves so that they will be ready as needed is one side of the problem; the obverse is the adjustment of total population numbers so as to hold down the strain on them. The Rome conference ought to consider a long as well as a short term—food supplied in the year 2000 as well as famine relief in 1975. The strategy ought to include the right amount of resources to put into the bringing forward of the reserves constituted by new lands in Africa, by potential fertilizer output, as well as those created by agricultural research. Every reduction of the birth rates reduces the pressure on the longer-term reserves.

*The Middle-Class Standard of Eating as a Reserve*

The high meat consumption of Americans, Europeans, and Japanese may be thought of as a fortuitous reserve. Suppose that 500 million people (in the United States, Europe, and Japan) drop their cereal-fed meat consumption by 40 pounds per head (or else substitute pasture-fed meat that does not compete with cereals). This releases something like 200 pounds of grain per person, or in total 50 million tons, about equal to the exports to poor countries in recent years. Not all of this is immediately available: farmers would have to stop feeding livestock to produce it, and that can be done economically only at certain stages in the animals' life cycle. The availability would be that of stored corn if no regard was had to cost, and somewhat less if minimizing the loss of meat was a consideration.

But physical availability is not the same as economic availability. Purchase by the government of the United States or West Germany or the oil-producing states of 50 million tons of grain on top of all the other demands in a crop year that is at best average would have drastic effects on prices. Even the whisper that anyone was thinking of going into the market on this scale could send prices upward. How far they would rise depends ultimately on how tenaciously the consumer of the industrial countries clings to his recently achieved meat diet. Every indication is that consumption achievements in meat, as in automobile transport, are held to very strongly; an attack on the standard of eating would arouse strong resistance.

Any attempt to procure the needed 50 million tons (say) of foodstuffs through the market would run into the inflexibility of markets caused by inflation, which would prevent the grain from becoming available by the only means physically possible in the short run—people restraining their consumption of meat. A tax on meat to force such restraint would be a sure way of bringing down the price of corn in ordinary times, but its consequences under inflation might be merely pressure for wages sufficiently high to offset it.

Any incapacity of money to serve the rationing function throws the problem directly into politics. To reduce the per capita consumption of meat by even 40 pounds suggests rationing, which means introducing a parallel currency system; one would need some of each of the two kinds of currency to obtain a pound of steak at the grocery store. If the ration currency were itself protected against forgery and other kinds of inflation, it would work, but at a political price that there is no sign of the majority finding justified.

The immediate response of those in the affluent countries to any suggestion that they reduce consumption (not by going hungry but only by obtaining a part of their protein from beans rather than meat) is that the sacrifice would permit further population growth in the poor countries and so ultimately add to misery. To counter this response, the poor countries need to show how present emergency relief is part of a long-term scheme—that it will lead not to an enlargement of poverty and further need for charity but to independence.

If the poor countries can present convincing plans for prospective food production and for population control (including the earliest possible drop to the two-child family that is now the average in rich countries) they will go a long distance toward enlisting the cooperation of Europe, America, and Japan. That cooperation could even go as far as some scaling down of consumption of animal protein.

But my purpose has been less to argue the case for or against sacrifice than to attain some clarity on the food-population dilemma. A start would seem to be to consider reserves at all levels of availability, and not only those immediately visible. The many tiers of reserves, along with population, would then be adjusted in an accordion-like movement, to minimize hunger over the next generation. One hopes that some action will emerge better than the policies neglecting agriculture in the Third World that planned us into present misfortunes.

MR. JOHN A. BUSTERUD:* It is with some degree of trepidation that I appear before you to discuss so profound and critical a subject as limits to growth. While we on the Council on Environmental Quality are charged with a very broad responsibility for making recommendations to the President with respect to environmental problems, we recognize that we have no monopoly on environmental expertise. Indeed, we in the environmental movement often make the point that ours is a multidisciplinary movement. And while, until recently, our principal concern has been with biologists, chemists, limnologists, geophysicists, and economists, current world trends tell us that we need your profession as well in the increasingly difficult struggle to provide a higher quality of life for our citizens and the world at large.

A great industry—insurance—has been built on the informed predictions you have provided, and, at least in dealing with the population aspects of the world problématique, the contribution of groups such as yours will be most useful.

But enough of that. Your chairman has asked me to tell you something of the governmental and quasi-governmental responses to this complex of world environmental problems of which you have been hearing this afternoon. First a caveat: we are still very much in the rudimentary learning stage as to dealing with these recurrent and accelerating crisis conditions and are still struggling to understand how to *define* the problems, in order that we may deal with them intelligently. All too often, because of our lack of knowledge as to the holistic nature of the crises that increasingly beset us, we deal with isolated aspects of the problem and, indeed, often with mere symptoms rather than root causes.

I am sure that world interest in limits to growth has been largely the result of the now-famous Club of Rome study of that name, although the world's consciousness has also been stimulated by such immediate manifestations of the problem as the energy crises, the population

* Mr. Busterud, not a member of the Society, is a member of the President's Council on Environmental Quality, United States Government.

explosion, and the growing shortage of food. The Club of Rome has rendered a great public service in coming forth with its report, and continues to do so with its ongoing effort to refine its world model. And, while it has recruited outstanding scientists in its cause, perhaps the most significant and gratifying aspect of its work is its sponsorship by forward-looking business leaders.

We on the council see the world problématique as of broad scope and great seriousness, but we have a somewhat more optimistic view of the situation than does the Club of Rome. A flaw in the club's work has been its failure to take into account a number of factors, including the automatic economic choke-off responses that are activated as each crisis heats up. The laws of economics have not been repealed, and already we have seen evidence of how these forces—together with voluntary conservation efforts—have brought about dramatically a new, lower growth curve for energy since the events of last winter. I anticipate that these forces will continue to work effectively to moderate the more dire predictions of the club's studies.

Yet I am no Pollyanna. When I take issue with the Club of Rome, I am talking more about *timing* than about eventual result. For we do live in a finite world, and there is no ultimate solution to our environmental dilemma but zero population growth and a drastically altered use of the world's raw materials, including particularly fossil fuels. Moreover, I doubt whether there are many in this room who, given the choice, would apply the harsh remedies of Malthusian economics to the problem of feeding hungry millions in developing parts of the world.

Assuming, then, that there must be some governmental response to the growing pressures upon our natural world as a result of man's activities, what has been the nature of that response? Probably less has been accomplished by government in dealing with the burgeoning world population than in the areas of pollution control and energy. This is due partly to the amorphous nature of the problem as well as to the difficulty of obtaining the facts as to the real dimension of the crisis that appears to be overtaking us. We are beginning, however, to make some headway. Here in the United States, with our advanced level of technology, including the "pill," and a generally high level of education, we actually have achieved the basis for zero population growth, although, even if we stay at the replacement level, where we now find ourselves, our population will continue to increase significantly for another fifty to one hundred years.

When I use the word "technology," I do not, of course, mean to discount the accidental effect of television as one of the offshoots of that tech-

nology. In a highly materialistic culture we have occupied ourselves sufficiently with the tube and other similar diversions that apparently little time is left for conception. It is a fact, for example, that exactly nine months following the famous blackout of November 11, 1965, in the northeast, which, among other things, turned off television sets by the millions, there was a marked increase in the birth rate!

Other developed countries also have made progress in arresting population growth, but in the developing countries the situation continues to worsen, as death rates are reduced through better health care without a concomitant reduction in births. The success of our insurance companies has rested largely on this same principle, that is, that with modern health advances there will continue to be a gradual prolongation in the length of life.

To deal with this critical problem, the United States has lent full support to the international effort to drastically reduce birth rates. Principal substantive responsibility in population problems rests with the Department of Health, Education, and Welfare, but the State Department is also heavily involved. We at the council have involved ourselves increasingly in the effort to coordinate population policy, and we fully recognize that failure to cope with this problem successfully in the past lies at the root of many of our world environmental ills.

Secretary Weinberger of HEW and Chairman Peterson of our council led the United States delegation to the recently concluded United Nations World Population Conference in Bucharest. Unfortunately, when the United States delegation arrived in Bucharest, it found the so-called Third World unwilling to accept the point of view of the United States and other Western democracies. The socialist and developing countries stoutly maintained that population was no problem for *them*—that, on the contrary, there was a need for increased population levels to develop adequately their economic base. This argument, of course, shied away from the stark reality that capitalist countries such as the United States have been called on time and time again to make up for the growing food deficit in the developing world.

The United States, on its part, made four major pledges to the conference:

1. To carry out the World Population Plan and to ensure the availability of family planning services.
2. To undertake a collaborative effort to assist poorer countries to develop low-cost systems for health care and family planning.
3. To accelerate joint research in reproduction and fertility control.

4. To urge Congress to give further financial support to international population activities, if similar support is forthcoming from other donor countries, especially the newly wealthy Middle East.

We intend to continue our efforts to gain world support for sensible population policies, and to take into account self-help efforts by developing countries in shaping the extent and nature of our aid.

So much for population. Turning now to one of the more serious manifestations of man's influence on our planet—pollution—government efforts seem to be having greater success. While the effort to achieve clean air and water has been under way for many years, until recent legislative efforts embodied in the Clean Air Act and the Federal Water Quality Control Act became effective, we fought a steadily losing struggle.

These studies have now put us on a course which, if allowed to continue, gradually will bring us both cleaner water and cleaner air. We are now committed to a massive water cleanup, for example, involving a major new federal financial commitment under the Federal Water Quality Control Administration to assist local communities in building sewage treatment facilities. At the same time we are beginning to impose stringent air pollution standards that will drastically reduce adverse effects on human health and save more than their total cost in reduced property damage and health care.

Unfortunately, industry's response to current energy shortages has been to urge a retrogression to inadequate standards which could cause untold deaths and illness if allowed to prevail. While it is true that we, as the leading energy-consuming nation, have to provide an increasing degree of independence from the vagaries of world energy supply, we at the council believe that in solving energy problems we must take the long-range view. Thus we have emphasized a strong effort at energy conservation and have urged such responses as an energy tax to further dampen demand. Our "half and half" plan calls for a per capita energy growth rate of 0.7 per cent per year and a continuing conservation effort which would be equal to another 0.7 per cent per year, which together would be the equivalent of a 1.4 per cent increase in energy use per year, much below pre–energy crisis rates of 3 per cent per year.

I hardly need point out that energy consumption is the principal cause of most air pollution and of much water pollution as well. Thus, by attacking profligate energy use, we will at the same time make a major contribution to pollution control.

But while we are engaged in this conservation effort, we must begin *now* to develop new, clean sources of energy to fuel the world in the

twenty-first century. To that end, the administration has proposed and Congress has enacted a new law to create an Energy Research and Development Administration, which will be financed generously to provide feasible methods for cleaning coal and high-sulfur oil and to develop economical new fuels, including those from solar, geothermal, and fusion energy sources.

At the same time, we have centralized most of our immediate energy responsibilities in a new Federal Energy Administration. President Ford has now before Congress a proposal to consolidate these offices with Interior Department energy responsibilities in a new Department of Energy and Natural Resources.

So you can see that we are making a start toward looking at the root causes of our environmental problems—not just at the disease symptoms. But we are only scratching the surface in facing up to other worldwide materials problems and in learning to produce with a truly no-waste technology.

Both the United Nations Environmental Program and regional activities in such groups as the Economic Commission for Europe are contributing to a broader overview of environmental problems and a greater recognition of the interrelationship of one problem to another.

As I mentioned at the beginning of my remarks, we must learn much more about probable national, regional, and international trends before we can convince world political leaders of the need for serious concern. To that end there is greatly increased interest in world modeling efforts, including recent refinements of the Club of Rome "limits to growth" model. We in the United States have developed two related models. The first of these, known as "SEAS," is the strategic environmental assessment system, developed by the Environmental Protection Agency, a comprehensive model which projects the generation of environmental residuals and the cost of their abatement. The second is "MERES," a matrix of environmental residuals from energy systems, developed by the Committee on Environmental Quality in association with other governmental agencies. It will permit assessment of the residuals generated by the extraction, processing, transportation, conversion, and use of different energy sources.

While both SEAS and MERES are still in their formative stages, we believe they can assist decision makers in assessing policies designed to deal with the world problématique. They are examples of the kind of refinement necessary to make the Club of Rome model a more effective tool in dealing with the world environmental problem, whether that problem deals with population, pollution, food, energy, or other materials.

A number of other governmental or quasi-governmental bodies are involving themselves in this work as well. Thus the Woodrow Wilson Centre for Scholars has compiled an inventory of all ongoing research on the problems of growth and will update its work next year. Others, like Resources for the Future, a foundation, are devoting considerable effort and expertise to the world materials balance and to residuals management and other aspects of no-waste technology. Another foundation, the National Centre for Resource Recovery, funded largely by industry, is developing systems approaches to the recycling of scarce materials.

Thus you can see that there *is* no monopoly on expertise in this critical area of concern. The task of dealing with these problems calls for all the expertise we can muster—both inside and outside government. Groups such as yours can perform a useful service in marshaling your particular expertise in an advisory role, to assist us in developing scenarios for the future.

There is no room for complacency today. If we are to devise a world plan which will both permit our species to survive and better the quality of life, we must work rapidly. There is little time left. Our present economic difficulties represent only the tip of the iceberg, but they do help us to begin to prepare for other related environmental problems that will manifest themselves increasingly in the years ahead. Our political and economic systems have risen to difficult challenges before, however, and I believe that, given the hard facts, the American people and other Western democracies can do it again.

DR. HERMAN DALY:* I was asked to deal with the nonpopulation aspects of the "problématique," to assess the degree of consensus among economists regarding the "limits to growth" issue, and to say a few words about possible solutions or resolutions.

To begin with the easiest question, it is clear that a high degree of consensus exists among economists that growth is good and, therefore, cannot possibly be limited. The only thing worse than no consensus is a completely unwarranted and erroneous consensus, and it seems to me that this is what we have. However, most economists have come around to the belief that population cannot grow forever, and therein is the beginning of wisdom. But growth in the population of artifacts is still considered potentially unlimited. One of the main arguments for limiting population growth is that it will make possible a faster growth of artifacts per capita. Alternatively, it is argued that a growing population of artifacts is a

* Dr. Daly, not a member of the Society, is professor of economics, College of Business Administration, Louisiana State University.

precondition for achieving a constant population of people. Unless people aspire to more artifacts more than they aspire to more children, then population will grow. Thus, it is argued, the way to stop population growth is to increase artifact growth.

Some economic growth men attempt an end run around physical limits to artifact growth by appealing to the increasing relative importance of the service sector. But this is an elementary confusion. Services always have a physical base, as do the people who render them. It is always some*one* or some*thing* that yields services. Even a symphony concert requires a number of healthy musicians, their instruments, an auditorium, and all the supporting activities by which these are maintained and transported. The two largest consumers of electricity in the Boston area are the Massachusetts Institute of Technology and Harvard hospitals, both service institutions. All useful services require the expenditure of low-entropy matter and energy. Some activities use large amounts for trivial or perverse ends, others use smaller amounts for more or equally worthy purposes. There is plenty of room for improvement in the efficiency of our use of low-entropy matter and energy, but no room for the growth squad to do an end run around the ultimate physical constraints. Even such a renowned technological optimist as Dr. Alvin Weinberg has stated that the unavoidable heat limit to energy use would, at the current 5 per cent energy growth rate, surely be encountered in less than two hundred years, and that climatic reactions may force us to limit energy growth within thirty to fifty years. Others feel that the marginal social costs of growth already exceed the marginal social benefits, regardless of the proximity of more absolute limits—that is, growth becomes socially undesirable long before it becomes physically impossible. But that position is a minority one. The consensus among economists is that technology always will find new ways for growth to continue in such a way that marginal benefits of growth always remain above marginal costs.

So much for the unwarranted consensus. I am hopeful that a new consensus will develop around a more sensible position, and I would like to outline what seem to me to be some elements of that position. As noted previously, the beginning of all wisdom is the recognition that population cannot grow indefinitely. This commonplace proposition is the thin edge of a logical wedge whose thick end is capable of breaking the growth orthodoxy wide open. In addition to the population of human bodies (endosomatic or within-skin capital), we must also consider the population of extensions of human bodies (exosomatic or outside-skin capital). Cars, trains, and bicycles extend man's legs; buildings and clothes extend his skin; pots, pans, ovens, and sewers extend his digestive tract; libraries

and computers extend his brain; and so on. Both endosomatic and exosomatic capital are necessary for the maintenance and enjoyment of life. Both are physical open systems that maintain themselves in a kind of steady state by continually importing useful low-entropy matter and energy from the environment (depleting it) and exporting useless high-entropy matter and energy back to the environment (polluting it). In other words, both the population of endosomatic and that of exosomatic capital require an entropic physical throughput for short-run maintenance and for longer run replacement of deaths and depreciations by births and productions. If the throughput becomes too large, we have excessive depletion and pollution and the result is environmental degradation. It is important to emphasize that the two populations depend on the environment in essentially the same way. This is no mere superficial analogy. The same fundamental biophysical constraints that limit the population of human organisms apply with equal force to the population of extensions of human organisms. If the first limitation is admitted, how can the second be denied?

Perhaps we have been blinded to this physical limit on the population of artifacts by the rapid qualitative evolution of man's extensions. Since artifacts are more diverse and evolve much more rapidly than human bodies, it is more difficult to define precisely the relevant population, and to make comparisons over time. Exosomatic evolution, or evolution by prosthesis, occurs on a much shorter time scale than endosomatic evolution. Perhaps we have such a fixation on the accelerating qualitative evolution that technology induces in our prosthetic members that we have paid insufficient attention to the more prosaic purely quantitative dimension. Also, the social problems of distribution of and control over artifacts have been evaded by the strategy of producing more and more for everybody.

This vision of exosomatic evolution and its social consequences was expressed by A. J. Lotka, and it is very fitting that I should quote Lotka to an assembly of actuaries:

> The most singular feature of the artificial extensions of our natural body is that they are shared in common by a number of individuals. When the sick man consults the physician, who, we will say, makes a microscopic examination, for example, the patient is virtually hiring a pair of high power eyes. When you drop a nickel into a telephone box, you are hiring the use of an ear to listen to your friend's voice five or ten miles distant. When the workingman accepts a wage of forty dollars for his weekly labour, he is in fact paying to his employers an undetermined amount for the privilege of using his machines as artificial members to manufacture marketable wares.

The modern development of artificial aids to our organs and faculties has exerted two opposing influences. On the one hand, it has in a most real way bound man together into one body: so very real and material is the bond that society might aptly be described as one huge multiple Siamese twin.

On the other hand, since the control over certain portions of this common body is unevenly distributed among the separate individuals, certain of them may be said in a measure to own parts of the bodies of others, holding them in a species of refined slavery, and though neither of the two parties concerned may be clearly conscious of the fact, it is often resented in a more or less vague way by the one less favoured.

Amelioration of this "species of refined slavery" has been sought by both capitalism and communism through the strategy of rapid growth: produce so many artifacts that they cease to be scarce and thus lose their power to enslave man. This is explicit in Marxist theory, and, although liberal capitalism does not speak of any such slavery, it does seek to dissolve the claims of distributive justice in the solvent of growing abundance. Thus it would be very convenient for both systems if there were no limits to growth. Of course, even if there were no limits, it is not at all clear that aggregate abundance would lessen inequalities, but such is the shared faith. Both communist and capitalist economists have yet to make their peace with the second law of thermodynamics.

But problems arise from the qualitative aspects as well. In our frenetic attempt to maintain the high growth rates of the last half-century, we are adopting blindly technologies whose social costs are not understood and which may increase the degree of Lotka's "refined slavery" rather than diminish it. A salient example is the rush to fission power, with nothing but vague assurances in reply to the many technical, economic, social, and moral problems that nuclear power raises. We are, in a most undemocratic fashion, adopting an extremely dangerous technology in order to maintain historical growth rates at a time when such rates are no longer necessary or desirable. In order to keep the kilowatts humming in the golf carts and electric blankets, we accept the Faustian bargain of nuclear power with its enormous demands on social discipline and control. Kenneth Boulding has said: "In the West our desire to conquer nature often means simply that we diminish the probability of small inconveniences at the cost of increasing the probability of very large disasters." That does not strike me as actuarially very sound, nor does the Price-Anderson Act, which arbitrarily limits liability in nuclear power generation to a small fraction of possible damage and makes the general public foot most of the bill for the available insurance. Risks are a real cost of

production, and, if they cannot be insured adequately on a commercial basis, then perhaps the activity in question should not take place. Risks cannot be made to disappear by government fiat.

The public is told that "the probability of being killed by a nuclear power plant is one chance in 50 million per year" and that "nuclear power is as dangerous as taking one puff from a cigarette each year" (Bernard I. Cohen, *Bulletin of the Atomic Scientists*, October, 1974). How can anyone possibly justify such statements on an actuarially sound, objective basis? What does "probability" mean in the absence of a long record of actuarial cases? Does the "probability" of being killed by a nuclear power plant include the risks run at other parts of the fuel cycle—mining, enriching, reprocessing, transporting, and dumping? What happens to "probability" if purposeful sabotage and terrorism are recognized?

One problem with rapid evolution by prosthesis is that our artificial members change qualitatively before we accumulate a record of past occurrences sufficient to calculate the objective probabilities of their malfunction. At the same time, the growing scale of our artifacts vastly increases the cost of malfunction. We move from a world of small-scale activities with known risks to a world of large-scale activities with pure uncertainty. Are we being comforted beyond all warrant by the remote numerata of subjective probabilities easily calculated by computer simulations run by promotional interests, but not derivable from experience?

I am no actuary, but I believe that actuaries could perform a true service by explaining to the public why most home insurance policies carry a nuclear exclusion clause, explaining the difference between insurable risk and noninsurable uncertainty, and performing an independent watchdog function to discredit loose and misleading appeals to excessively comforting or alarmist pseudoprobabilities.

If unrestrained growth is pushing us down the path of increasing depletion, pollution, and ecological disruption, and is in fact increasing the likelihood of large technological disasters, then the obvious solution is to restrain growth. How can we achieve a stable or steady-state economy? How can we stop the population explosion and runaway evolution of our exosomatic prosthetic organs? How can we make them *serve* us rather than *drive* us?

If we were truly convinced of the necessity and desirability of achieving a constant population and a stabilized stock of artifacts whose technical evolution was not excessively rapid, and of maintaining these populations by a low depletion-pollution throughput, I think it could be done fairly simply. The problem is one of will and priorities, not of technique.

Elsewhere (*Toward a Steady-State Economy*), I have suggested three interrelated institutions for maintaining a steady-state economy:

1. A system of birth quotas distributed equally in an amount corresponding to replacement fertility, but freely transferable by sale or gift.
2. The setting, according to ecological and ethical criteria, of quotas on annual depletion of each basic resource, the quotas to be auctioned by the government and the amounts paid to be public revenue. The quota right entitles the resource owner to extract up to the corresponding amount.
3. A minimum floor to personal income and a maximum ceiling on personal income and wealth. The goal is not to achieve complete equality but to limit inequality. Within the limits the market system determines distribution.

Such a scheme builds on existing institutions of private property and the price system, but imposes necessary limits on aggregate births, aggregate throughput, and the degree of inequality. It achieves macro stability with the least sacrifice of micro freedom and variability. The steady state could be approached with any degree of gradualism desired. Initially the birth quotas, depletion quotas, and distributive limits could be set at existing levels and extremes and gradually tightened year by year to more sustainable and just levels. I expect that improved schemes could be devised, but so far not many people are willing to speculate on such matters. There is still an enormous faith in a providential, invisible hand guiding our demographic, economic, and technical evolution toward some unknown optimal destiny. As long as such a belief is dominant, then the institutions I mentioned would be ineffective. But political realism cannot forever remain at odds with biophysical realism. Today's political "realists" may well be tomorrow's crackpots.

MR. DAVID S. WILLIAMS: Our guest panelists have sketched expertly for us the dimensions of the complex of world problems known as the "problématique." Although its urgency is still very much a matter of dispute, there is enough circumstantial evidence to give a prudent man cause for concern. But is it properly a matter of professional concern?

The actuarial profession, like any other profession, involves a department of knowledge and its skilled application in the service of others. The question may therefore be rephrased, "Can the expertise which actuaries command be applied usefully to shed light upon these issues?" Bob Mitchell, in his short but well-written history, described the actuary's role very nicely: making future uncertainty less uncertain. By this standard, actuarial expertise does have some relevance in this area.

Actually, the limitation may be a more practical one. Considering our modest numbers and resources, you may feel that there is nothing that

the profession can do that will be productive enough to justify the time and effort involved. Well, I am not going to let you off the hook that easily, because the actuarial profession in my view does have a significant role to play—certainly in the United States and Canada, and I would hope in a number of other countries as well.

Since the *Limits to Growth* report several years ago, many writers have addressed one facet or another of the problématique. In doing so, they seem to have divided themselves into two groups—pessimists and optimists, or, in more partisan terms, prophets of doom and Pollyannas.

Political leaders have been much more cautious in this respect; they have been rather successful in avoiding the subject entirely. Perhaps, however, it is unfair to judge them too harshly. Advocating zero population growth, for example, means violating a cardinal rule of politics—it means coming out against motherhood!

However, the problématique, to the extent that it really exists, cannot be wished away. In fact, it may be more than a small cloud on the distant time horizon: the energy crisis and worldwide inflation, reflecting the tightening constraints upon our way of life, are being interpreted by many authorities as the distant early warning signals of much harder battles ahead.

Government measures to counter the energy crisis were taken only after the problem was fully manifested, even though it had been predicted frequently during the preceding decade. It would be unreasonable to expect democratic governments to be any more effective in heading off other crises that may lie ahead—at least, not unless government leaders are pressured into doing so by an informed public.

And this is where there is a potentially significant role for the actuarial profession—contributing toward improved public understanding of the problématique. Here, despite our limited numbers and resources, we can act as catalysts to promote public awareness and concern, which in turn should result in a more effective and timely national response.

This sounds like a magnificent statement of general policy, but can we translate it into specifics? Here are a few ideas for starters:

1. *Activity in Public Forums*

A four-day symposium is currently in progress in Winnipeg. The subject is "The Dilemmas of Modern Man." Authorities such as Dr. Aurelio Peccei, Maurice Strong, and Alvin Töffler are due to appear on the program. Advance publicity describes this as "your chance to come face to face with the latest thinking on some of the most pressing and controversial problems confronting the world today." The proceedings of the symposium are to be published and should make interesting reading.

However, the most interesting aspect of the symposium, I think, is that it is being sponsored by a well-known life insurance company, and a number of Winnipeg actuaries have been involved in the arrangements.

This is but one example of how actuaries can contribute to a better public understanding and appreciation of the problématique. Given some encouragement, innovative minds are certainly capable of developing many variations on the theme.

2. *Social Indicators*

The development and interpretation of indexes reflecting the quality of life is attracting growing attention, not only for the purpose of monitoring social change but even more for the purpose of understanding the underlying factors bearing upon the health and stability of our society.

Major efforts in this direction have been undertaken by the Council on Environmental Quality, the National Science Foundation, and the Department of Health, Education, and Welfare. Furthermore, the OECD countries have been developing standard social indicators to permit international comparisons.

Work with social indicators involves major conceptual and practical difficulties; obviously, if this were not so, they would long ago have become a familiar part of the statistical landscape. The fundamental problem is that it is very difficult to quantify essentially qualitative factors.

It is also true that social indicators relating to education, poverty, and working conditions, for example, fall largely outside the actuary's province—others are better qualified to research these areas.

Actuaries would be most effective in working on indicators developed from a more familiar form of data base, such as intercompany mortality experience on insured lives. Consider, for example, indicators reflecting suicide rates and homicide. Deaths from these causes represent situations in which our society has in some way failed. What about cardiovascular fatalities at ages between 30 and 50? These can reflect stress or lack of physical fitness (either of which is generally accompanied by reduced vigor and well-being). Naturally, the data would require analysis by income level or an equivalent, and by sex—probably also by geographic area. But some useful index or set of indexes based on such data could probably be derived. Similarly, research into morbidity data could be expected to yield other indicators.

It also will be apparent that research in this area can result in significant benefits for the insurance industry, such as a better understanding of mortality and morbidity risk factors and the extent of their correlation with specific social parameters. More generally, actuaries ought to gain a heightened perception of the current patterns and the implications of social change.

3. *Analysis of the Incidence of Disease*

Recently I noticed a report that New Orleans has for many years experienced an unusually high rate of gastrointestinal tract cancer. Could there be an environmental or dietary factor? Perhaps; but, on the other hand, it might be genetic.

Significant clustering of other diseases has been noted. Most of you will remember reading several months ago about a number of deaths from an extremely rare form of liver cancer among workers at a vinyl chloride plastics plant.

Suppose that the major life insurance companies performed systematic mortality studies by cause of death for their jumbo group policyholders. The findings could be significant.

Suppose that the intercompany mortality studies were revamped so as to produce cause-of-death ratios by geographic or metropolitan region. Potentially very interesting!

Expensive? Yes, but surely not prohibitively so, and there would be beneficial by-products. Improved data collection and validation would be one of the first. The Metropolitan Life, as most of you know, has been widely acclaimed for its pioneering work in this field. The expertise of the Metropolitan's actuaries would be invaluable in carrying out a feasibility study and planning possible projects involving mortality and morbidity statistics and causes of death and disease.

I believe that the Society's Committee to Co-operate with Governmental Demographic and Statistical Agencies (I hope they use an acronym) has also been active in this general area; in fact, their terms of reference might enable them to undertake major responsibilities in connection with such studies.

4. *Advanced Technical Studies*

Finally, our guest panelists have provided some most intriguing possibilities for further actuarial attention. Some of our members are highly skilled in statistical analysis and also in the application of operations research techniques. They should be encouraged to explore further along the avenues discussed today.

The Society has commissioned special projects in the traditional actuarial realm. It is even more important, I suggest, to sponsor work closer to the frontiers of actuarial knowledge. Otherwise our frontiers will not be extended or even maintained—the territorial imperative applies even here!

These are brief and preliminary sketches of a few possibilities for actuarial involvement in the larger issues of our time. Aside from their intrinsic merit, they would promote public recognition of and respect for the actuarial profession. Those with a creative turn of mind will have other suggestions, and I hope that they will offer them, either through the Society newsletter or through some other appropriate medium. I am looking for a grass-roots movement among my colleagues, for it must begin here in the same manner as it must come from the public at large in order to influence the respective governing bodies. Governing bodies always tend to assume a political posture vis-à-vis controversial matters—sitting on the fence and keeping an ear to the ground. Presently, when people ask what actuaries are doing about the problems impacting on our quality of life, I do not have a satisfactory answer. Do you?

DR. KEYFITZ: There are presently many people in the world who are starving, and their numbers will increase. In this issue, as in others, is there a tendency for those of us who have made it to pull up the ladder behind us and freeze the situation at the status quo? I am curious to hear Dr. Daly's comments on this.

DR. DALY: Certainly that is a question to which I should have given more attention. In one of my three proposals I mentioned maximum and minimum limits to income and wealth, and I believe that these are essential. Otherwise, any program which cuts back on consumption will be attacked on the grounds that it is prejudicial to the poor and that it has the effect of a regressive sales tax, all of which is totally true. I think we have to deal with that by going straight to the real problem of redistribution. I am thinking of this on a national basis for the United States only, not on a global basis. One could make a good case for having rewards commensurate with differences in talent and efforts, but what is the order of magnitude of such differences? I would think that it is somewhere around 10 to 1. So I would certainly not subscribe to the notion of pulling up the ladder behind us.

MR. JOHN WOOD: The Club of Rome, in their book *Limits to Growth,* made many projections involving food, population, pollution, and so on, and predicted possible catastrophes. These studies seem to me to be of an actuarial nature. I wonder whether anyone has any comments on this. Also, were their studies worthwhile?

DR. KEYFITZ: I have some complaints about some features of their methods which make them very different from the way actuaries go about their work. They assumed, for example, certain relationships between air pollution and the death rate. More studies need to be done on these relationships, and actuaries could have a role to play here. There is a real contrast between the way actuaries work, on the basis of sound data, and the methods used by the Club of Rome people, who assumed hypothetical relationships.

MR. RODNEY C. WILTON: I question the aim of the Club of Rome efforts. Those who discuss it seem to have as their aim total entropy of the human state, where every person descends toward subsistence level. Is it good and desirable that the peaks and valleys are leveled out? If so, what have we to strive for?

DR. DALY: I did not mean to give the idea that there should be a washing out down to some mean. The idea is to get off of exponential growth as the norm. This is a situation which cannot continue, yet so many of our institutions are geared to this. We must adapt to a more stable situation. The problem of sharing the burden of scarcities somehow must be spread. This is where redistribution comes in, since, unless action is taken, the burden would fall on the poor.

MR. BUSTERUD: It appears that this is a very sensitive mechanism that we are tampering with. But we have to remember that the United States today would not have the resources required to tackle environmental problems if it were not for the rapid growth of the past. I am not saying that there are no reforms that can be made, but I believe that maximum limitations are not the best incentive to produce a more desirable growth pattern.

MR. WILLIAMS: The Club of Rome has recognized the deficiencies in its *Limits to Growth* report, and currently it is pulling together and financing many additional projects. If anyone is interested in these projects, I would be happy to supply information on them. Just contact Lloyd Steinke or me.

MR. ALLAN D. GREENBERG: There seems to have been a concentration by the discussants on the subject of acquisition of artifacts. I wonder whether consideration has been given to the possibility of the emphasis shifting in future to something else, perhaps services or intellectual development.

MR. BUSTERUD: We at the council are working on this now to develop scenarios for more selective growth in the area of services, intellectual growth, and so forth. This is very difficult to do.

DR. KEYFITZ: Most of us here probably are past the stage of fascination with artifacts, but, when you talk to hard hats in the United States or their opposite numbers in Italy, this is not true. It is not the thing itself but the fact that it symbolizes their social ascent. It seems that people have to have a generation or two of these before they can see through them to higher things. It seems impossible for the remaining 3.5 billion people in the world to enjoy also what we have experienced, given the strain already put on the world's resources and environment.

MR. JAMES J. CONNORS: Has the pendulum on population growth in the United States swung too far in the other direction? We are now below zero population growth, and thirty and forty years from now the ratio of retired people to the working population will be much higher. What problems might this involve?

DR. KEYFITZ: There is an actuarial answer to this. You have essentially a pay-as-you-go scheme, so that each year's receipts are paid out to that year's beneficiaries. This means there will be differences in the tax or in the benefit, and thus you need a reserve in a nonreserve scheme. You would tax in accordance with the average ratio of people at the older ages to those of working age.

MR. ROBERT F. LINK: You must consider that there also will be fewer children, so, if you consider the total dependent population, you do not end up very far from where you are now. Also, children probably cost less to maintain than retired people. Hence, what you lose on older people you gain on the children.

MR. DAVID L. LIVELY: I address my question to Mr. Busterud. There have been several studies in the *New York Times* which suggest that none of these problems we have been talking about will occur because the ozone layer will be depleted. Is no one in the government concerned about this?

MR. BUSTERUD: I cannot accept your premise that no one in the government is concerned with this. There are a number of studies being made by various government agencies. Also, the Air Force continues to do much high-altitude research. It may be that we are not concerned enough about it but, as in the nuclear plant problem mentioned by Dr. Daly, it is very hard to get reliable data.

## MAINTENANCE OF HIGH STANDARDS IN A PROFESSION

Professional ethics and conduct as viewed by members of the accounting, legal, and medical professions and by actuaries from North America. Not only broad general questions on the subject are considered, but also specific problems in the handling of complaints on professional conduct and disciplinary procedures, both in theory and in fact.

CHAIRMAN ROBERT J. MYERS: We are here to discuss professional ethics and conduct and the significant differences in interpretation and application of standards of conduct that may exist among the various professions. However, since there might well be logical and desirable reasons for such differences, we shall not debate whether any one approach is superior or inferior to another.

For actuaries in the United States, the matter of professional ethics and conduct is dealt with largely by the guides to professional conduct of each of the five national actuarial organizations. Fortunately, these guides are, to all practical intents, identical.

The emphasis in the guides is largely on the relationship between actuaries and their publics, rather than on the relationships among actuaries. A very fine feature of the guides is that there are no restrictions as to proper and fair competition between actuaries or as to criticism of one actuary by another. I am very glad that they do allow for healthy, gentlemanly competition and exchange of criticism among actuaries. Actual or implied restrictions such that an actuary could not, in good faith, criticize other actuaries would be most unfortunate. Such criticism would, of course, not be directed at technical qualifications or procedures but rather would be in the wide-open area of proper and reasonable assumptions regarding long-range future cost factors or the basis of actuarial funding.

I have always held the belief that the actuary in an insuring organization has a special responsibility that transcends that of other employees or consultants. It is my opinion that the guides should go even further in the area of the responsibility of actuaries to serve the general public. This reasoning is based on the very complex nature of insurance, which, although it deals with monetary units, does so under circumstances that make it almost impossible for those insured to know whether or not they are being fairly and equitably treated with regard to gross premium, dividends, and nonforfeiture values.

Specifically, it seems to me that the actuary should always have the interests of the insureds in his heart as well as his mind. Obviously, this should be the situation in mutual organizations, and the actuary should resist strongly if by any chance management should attempt to treat any class of insured other than equitably.

This should be equally true in profit-making insuring organizations, and there should not be policies issued that are loss-leaders and others that generate huge profits, even though this may not be obvious or evident to the insureds. The actuary in such an organization should strongly resist and if possible prevent this type of situation.

In the case of pension plans, the actuary employed by the fund (i.e., its governing body) will have primary responsibility to the participants and will not be unduly influenced by the fund authorities. This does not, of course, mean that he will favor the participants as against those other parties that provide the financing (in whole or in part) but rather that his interest will be in having a well-constructed plan with equitable provisions that is adequately financed.

In the same manner, the actuary who is employed by the employer who established the pension plan owes a responsibility of a similar nature to the plan participants. This applies also to governmental pension plans, whether the actuary is a consultant or a government employee.

Actuarial science is not a game which is to be played with the objective of making as large profits as possible even if it means deception of the insured. Rather, the actuary has an indispensable role to play as the architect and economic engineer of the long-range economic-security structure so necessary to the people of the nation.

Finally, a few words about the handling of complaints with regard to professional conduct and about disciplinary procedures in the actuarial profession in the United States. I can speak from the vantage point of having been privileged to be President of both the Society and the American Academy of Actuaries, simultaneously.

Complaints as to professional conduct can come to the governing bodies directly from members, or such bodies can initiate investigations on their own, based on information made available in various ways. I shall not go into the details of the investigative and prosecutive procedures, since these are clearly spelled out in the yearbooks. But one might ask whether these are merely scraps of paper which are never enforced. The average member might well think that is the case because he rarely if ever hears about any disciplinary actions.

In the past such actions were not publicized—in part, at least, because serious incidents did not occur often, if ever, and in part because this seemed the gentlemanly approach. In fact, as I know the situation, few

if any serious cases occurred before my term of office, and when they did it seemed appropriate and sufficient for the then president to handle the matter by imparting a little well-chosen avuncular advice to the individual involved. I believe that this practice was satisfactory and should continue for most minor infractions.

During my term of office, several serious cases did occur, and I truly believe they were handled in a manner which was thorough and satisfactory to all concerned. Subsequently, some even more serious cases have occurred, and quite properly their handling has been more publicized.

It is interesting, and perhaps very significant, to note here that until 1973 the Professional Conduct Investigation Committee of the Institute of Actuaries in England had met only once in living memory.[1]

Now perhaps, with the growth of consumerism, and possibly also with our growth as a profession dedicated to serve a more inquiring or more skeptical public, more openness in this area will be both necessary and desirable. This, of course, does not mean that the specifics of all complaints would (or should) be publicized or that any warnings or reprimands should be on the public record but rather that general descriptions of serious cases, well disguised, could be published. Such a procedure would both make it clear to the public that the guides have substance and meaning and give more explicit guidance to members for their future actions.

The situation in the United States is complicated by the fact that there are five separate actuarial bodies. Fortunately—at least for my peace of mind—none of the complaints which arose during my term of office were filed with more than one actuarial body; otherwise, complications might have arisen if different bodies had decided upon independent courses of action. Subsequently, informal procedures were developed—and, in fact, have been put into operation—for use in those instances where more than one actuarial body may be involved. Nevertheless, there still exists the potential danger of diverse action by different bodies when dealing with the same case, and perhaps more formal coordination and cooperation should be developed.

MR. C. E. GRAESE:* Professions have been defined in many ways, but each definition invariably seems to include an emphasis on the fundamental requirements of competence, objectivity, integrity, and a dedication to those served. The mere possession of these characteristics, how-

[1] Remarks of Mr. Geoffrey Heywood made in the discussion of "Professional Conduct and Practice" by H. F. Purchase, *Journal of the Institute of Actuaries*, CXIX, 117.

* Mr. Graese, not a member of the Society, is a partner in the firm of Peat, Marwick, Mitchell and Company.

ever, does not entitle any group of practitioners to call themselves a profession. Professional status is not self-bestowed. It is granted only by the public after the practitioners have demonstrated over a sufficient period of time that they do, indeed, practice with a dedication to these principles.

Nor is the right to professional status granted in perpetuity. Retention of such status must be rejustified constantly by the profession through responding in a creative and responsible manner to the changing needs of society. Each profession must review its standards constantly to ensure that they are up to date and responsive to society's needs and must establish machinery for disciplining those who violate prescribed standards. Equally important, the self-disciplinary machinery must function so that its effectiveness and diligence in protecting the public interest are demonstrated to the public's satisfaction. This is most difficult in times when the public is looking to its professions to assume increasing responsibility in their respective fields of endeavor and when there are general changes in the attitude and ethical standards of society as a whole. Both of these conditions exist today. No profession has escaped the impact of the growing complexity of society and the problems it faces. Every profession is faced with a rapidly expanding body of knowledge and the increasing need to interrelate with other disciplines in carrying out their practice. At the same time, every profession has been affected by the increase in social consciousness and changes in social values which are taking place in society today. I think it is safe to say that today every profession's standards and self-disciplinary machinery are under attack. The challenge to each of us is to respond comprehensively and expeditiously so as to continue to warrant the public's confidence and our right to professional status.

Let us be a bit more specific about the accounting profession. It is unique in many ways among the commonly recognized professions. First is the matter of licensing. Individuals enter the accounting profession through passing an examination. Although their C.P.A. certificate or license is granted by one of fifty-four state or territory jurisdictions, the examinations in all states are identical, being prepared and graded by the American Institute of Certified Public Accountants. Each state, however, imposes different experience, education, or other requirements, and in a few cases an additional section is added to the uniform examination. Reciprocity is generally granted, provided that the experience, education, and other general requirements of the specific state are met. The C.P.A. certificate in some states grants the individual the exclusive right to express opinions on financial statements, whereas in ten jurisdictions the

certificate merely permits the individual to hold himself out as a certified public accountant.

The accounting profession is unique also in its composition and organization. About 40 per cent of the individuals holding C.P.A. certificates are not actively engaged in public practice, and of those engaged in public practice a significant percentage are engaged in activities which are not limited to C.P.A.'s or regulated by state laws, such as management consulting, taxes, and general assistance in accounting and bookkeeping matters. Only the function of auditing and expressing opinions on financial statements is regulated by state law. Furthermore, in contrast to all other professions, the requirements of the accounting practice have resulted in the development of large firms with professional staffs of 15,000–20,000 spread over sixty or more countries. Although professional standards apply equally to large firms and individual practitioners, the problems faced by the two obviously are quite different.

Typically, C.P.A.'s are subject to review and discipline by a number of separate bodies. The C.P.A. certificate of any individual, whether in public practice or in a private occupation, may be suspended or revoked by the state board of accountancy of the state granting the license. Most C.P.A.'s also belong to one or more professional organizations which also have codes of ethics and disciplinary machinery. The national voluntary professional society is the AICPA. The AICPA now has over 100,000 members and thus obviously speaks for a large portion of the accounting profession. Each state or territory also has a voluntary professional society which the member may join. Many of the state societies and some of the state boards of accountancy have adopted a code of ethics and professional standards identical to that of the AICPA.

In addition to the state boards, state societies, and the AICPA, the Securities and Exchange Commission and the Internal Revenue Service also play a significant role in maintaining the standards of the C.P.A. profession. Perhaps I should add that the ever present threat of litigation has also had its impact. Most accountants believe that litigation against the accounting profession has got out of hand and is causing the profession to shy away from some responsibilities they should assume. Unfortunately, the accountant's liability insurance has frequently been the only source of funds from which the plaintiffs could possibly recover any claims, and thus litigation against accountants is apt to be a continuing tactic, whether warranted or not.

At the present time each of the state and national professional disciplinary bodies acts independently. Therefore, a C.P.A. may find himself subject to discipline by three or more separate bodies for the same

unethical act. I am pleased to relate, however, that at the meeting of the governing council of the AICPA at Seattle on October 12, 1974, a procedure was approved whereby a joint disciplinary machinery will be established to act on behalf of both the AICPA and the participating state societies. At this point in time it is estimated that forty of the fifty-four of the jurisdictions will agree to participate at the inception, and it is hoped that others will join in the future. Under the procedure a single trial board will hear each case. A member found guilty of a violation of the Code of Ethics or of an act discreditable to the profession will be disciplined automatically by all the participating voluntary societies or institutes of which he is a member, and, further, a reference may be made by the disciplining trial board to the applicable state board of accountancy if the act appears to warrant suspension or revocation of his C.P.A. certificate or license to practice.

This action was but the latest step in a series of moves made by the AICPA to enhance its professional standards and their enforcement. The institute, almost two years ago, adopted a new Code of Ethics which represented a major revision of the rules of conduct which had been in effect prior to that time. The new code consists of three basic sections. The first is a series of "Ethical Concepts." This is a philosophical essay suggesting behavior which C.P.A.'s should strive for beyond the minimum level of acceptable conduct set forth in the formal Rules of Conduct. The second section, "Rules of Conduct," comprises the enforceable ethical standards. The third section consists of "Interpretations" of the rules and provides guidelines as to the scope and application of the rules. While the interpretations do not in and of themselves constitute enforceable rules a member who departs from such guidelines has the burden of justifying departure from them in any disciplinary hearing. The institute has also published rulings of a fourth type which consist of informal pronouncements by the Ethics Committee in response to specific inquiries. These publications have been most helpful in keeping the profession up to date as to the nature and content of the ethical standards. In addition, the institute also has available a self-study course on ethics, including examinations which are graded by the institute.

In the area of detection of violations, the institute processes numerous complaints received from other members of the profession or the general public. In addition, the institute maintains a clipping service which monitors a number of newspapers and other publications for possible indications of violations. The institute also has worked out a specific arrangement with most of the United States federal agencies for referral to the institute of any evidence of alleged substandard work.

Complaints are reviewed by a professional Ethics Committee whose responsibility it is to determine if a prima facie violation exists. This committee is voluntary and consists of members in public practice. It is, however, supported by a paid professional staff, including two lawyers, having a budget in excess of one-quarter of a million dollars. The trial board that hears cases and makes final determinations is also a group of unpaid professionals in public practice.

How is this system working? My position, of course, is hardly unbiased, but I do believe that the machinery is working quite effectively. During the last five years the institute alone has completed the processing of 415 cases. Of these, 219 have resulted in some form of disciplinary action, and, of this number, 96 members have been expelled or have had their membership suspended for a period of time. Thus our record is essentially that slightly over 50 per cent of the cases have resulted in some form of discipline and approximately 25 per cent have resulted in expulsion or suspension of membership. I believe this clearly indicates that the profession is recognizing its responsibilities to the public and is diligent in disciplining its members when less than satisfactory conduct is involved.

This does not mean, however, that the procedure is such that effort will not continue to be made to improve it, nor does it mean that it is beyond criticism. Quite the contrary. But perhaps a word about this criticism is in order. Undoubtedly some individuals who file a complaint which does not result in disciplinary action of desired severity are disappointed and are apt to be critical of the system regardless of the merit of their complaint. Hopefully, and I believe realistically, this is not a major problem.

A second type of criticism results from a lack of knowledge of what is happening. The institute's disciplinary machinery is such that, although the results of every disciplinary action by the trial board must be published, the name of the member being disciplined may be withheld from publication if, in the opinion of the trial board, the circumstances surrounding the violation warrant such treatment. This procedure, coupled with the general confidentiality which is imposed on all investigations, tends to keep the true extent of disciplinary action from the public eye. While I sincerely believe that confidentiality in investigations is essential to protect the rights of all concerned, I do think that as a profession we will have to look into ways in which the credibility of our disciplinary process can be enhanced with the general public without jeopardizing those rights.

Perhaps the most serious criticism of the disciplinary process relates to cases involving litigation. In recent years a wave of litigation has swept

the financial community in which public accounting firms are frequently named as defendants. Some of these undoubtedly are warranted, but, as I have mentioned earlier, in many cases I suspect that the extent of their professional liability insurance has made accountants an attractive source of possible recovery when financial losses occur. The disciplinary machinery of the profession has been criticized on such litigation cases on two counts. First, it is customary, after a preliminary inquiry to determine the nature of the litigation, to defer further investigation until the completion of the civil or criminal litigation. This, in itself, is not particularly unusual in disciplinary proceedings. However, in some cases the litigation involved has dragged on for several years and consequently an extended period of time elapses before the ethics investigation takes place. This is justified in part because to proceed immediately could jeopardize the rights of the parties in litigation and therefore voluntary cooperation would not be forthcoming. More important, because of the complexities of these cases, the extent of fact-finding involved represents such a significant undertaking that it is financially not feasible and otherwise impractical to duplicate the fact-finding process of the courts. In some cases the matter of ethical or unethical conduct will hinge on the ultimate determination of fact by the court or jury. Frankly, while we recognize that the delay is a valid basis for criticism, we know of no viable alternative under existing statutes. Perhaps I should also add that on balance I believe the advantages of the present approach more than outweigh the disadvantages from the point of view of both the profession and the public in the total disciplinary picture.

The second count of criticism concerning cases in litigation involves what I consider to be a misconception on the part of the public as to professional standards. No profession guarantees infallibility. A professional may conform fully with acceptable professional standards but nevertheless not achieve the desired result. "Just because the patient died, it doesn't mean the surgeon was guilty of malpractice." Thus it is entirely possible that a court may hold a professional financially responsible for an error in judgment, but this does not automatically mean that the individual has violated professional standards. This, too, in my opinion, involves a matter of public education, assuming, of course, that the professional standards involved are adequate to the circumstances.

Although not a part of the disciplinary process, this discussion would not be complete without a mention of the peer-review program of the AICPA. This is a program whereby a C.P.A. firm voluntarily calls on the institute to send in a team of outside C.P.A.'s to review the firm's professional practice controls and policies, including such matters as personnel recruiting, evaluation, training and promotion practices, auditing pro-

cedures and practices, the existence of professional quality controls, and finally a test review of actual engagements. Originally the program was designed for small practitioners who did not have the resources to develop their own programs. The larger accounting firms have all set up their own "internal audit" departments. Now, however, the institute has extended the program to the large C.P.A. firms as well. One major firm has already volunteered for the first review, which is expected to cost it between $300,000 and $500,000. More firms are expected to follow next year. While the AICPA program is voluntary, I believe that the institute should make a periodic review mandatory as a requirement of membership, and I fully expect such to be the case in several years.

In summary, let me state that I believe the accounting profession is acutely aware of the need to re-examine constantly the adequacy of its professional standards and the effectiveness of its quality control and self-disciplinary processes. Although at times this introspection has been painful, each positive action has always resulted in a better service to the public and an added degree of professional stature to the C.P.A. profession.

MR. LYMAN M. TONDEL, JR.:* Before I say anything about efforts to maintain high professional standards among lawyers, I shall express two thoughts based on my reading of your *Transactions*.

While the set speeches on professional responsibility reported in your *Transactions* were aspirational, the discussions from the floor reflected considerable confusion as to the extent, even as to the existence, of an actuary's responsibilities to anyone other than the employer or client. There was considerable tenderness toward the interests of those who market insurance and pension plans. Lest I be thought overly critical, I must confess that anyone reading the proceedings of the American Bar Association meetings could detect the same dichotomy between the preachments from the podium and the observations from the floor, although the preachers have made undoubted progress over the years.

My first thought, then, by no means new, based on the reports of your *Transactions*, is that a fundamental step toward full professional responsibility is to achieve rank-and-file recognition among actuaries of their public responsibilities. The great Harvard Law Dean Roscoe Pound put it this way twenty years ago:

> The term [a profession] refers to a group of men pursuing a learned art as a common calling in the spirit of a public service—no less a public service because

* Mr. Tondel, not a member of the Society, is a member of the firm of Cleary, Gottlieb, Steen and Hamilton.

it may incidentally be a means of livelihood. . . . Historically there are three ideas involved in a profession: organization, learning, i.e., pursuit of a learned art, and a *spirit of public service.* These are essential [emphasis added].

And my old corporate law professor, E. Merrick Dodd, added the element that, for professional status to be meaningful, it must be created and enforced *from within* the profession itself. He said, in speaking of business ethics:

> The legal standard applicable to the directors and other persons by whom our large business corporations are managed will prove extremely difficult of enforcement unless that standard is calculated to appeal to the managers themselves and thus to attain the status of a professional code of ethics rather than that of a legal rule imposed upon an antagonistic group by the community at large.

Recent commentators add that, as distinguished from businessmen,

> for professional men there are room and need, not only for higher standards, but also for sanctions in group attitudes that go beyond the processes of the law.[1]

Those professions which impose standards on themselves that are even higher than enforceable legal standards do so not only because they recognize their obligations to society. It is also because they have achieved a group attitude that, in the long run, adherence to such higher standards is best for their clients or employees and for themselves as well.

My second thought from my reading of your *Transactions* is that the public importance of your profession has grown so great that neither your rank and file nor their clients or employers can afford to underrate their public responsibilities. Their self-interest demands adherence to very high professional standards of competence, integrity, and independence of judgment. There are, of course, the risks of being decertified for misconduct if high professional standards are enforced within the profession; there could be resulting increased risks of liability; and insistence on total independence of expert judgment would certainly lead to criticism by some clients or employers. I suggest, however, that these risks are heavily outweighed by the benefits to your clients and employers of being assured that *they* are on sound actuarial ground, with less risk of devastating lawsuits or even financial collapse, and that these risks are also outweighed by the benefits to actuaries of assured professional standing—to say nothing of the inner sense of satisfaction of knowing one is performing a public service as well as he knows how.

[1] Thurman, Phillips, and Cheatham, *Cases and Materials on Legal Profession* (1970), p. 156. The same authors called attention to the Pound and Dodd quotations.

It would be redundant to recite figures to show the extent to which the American people rely on you to protect them in their old age or disability, and their families after they are gone. The fact is plain for all to see that the soundness of all the insurance and pension and retirement programs in this country, to say nothing of social security itself, depends on actuaries' training, experience, objectivity, integrity, wisdom, and, perhaps above all, "spirit of public service." This being so, how can you do otherwise than put public responsibility first?

Is this wholly impractical? I think not. There is often in your work, as in the work of lawyers, a range for honest disagreement, a range within which an actuary or a lawyer is entitled to press his client's or employer's position. There are, however, limits to honest disagreement; if an actuary or a lawyer expresses a position for a client, or gives an opinion, that he knows cannot be justified honestly or that he gives only because he is told to do so, then he has failed in his overriding public responsibility, and such conduct, I suggest, is not only reprehensible but self-defeating.

I realize that some of us are confronted by clients or employers who are quite insistent that we strain, or even disregard, the limits of what we in our expert judgment believe to be correct. At that point, do you stick to your guns, or do you stretch beyond your own good judgment? Do you withdraw, or do you do what is asked but with a qualification, as is apparently permissible under item 4(*c*) of your Guides to Professional Conduct? I suggest that the public reads neither fine print nor hedges and that item 4(*c*) is somewhat below the standards to which you should aspire.

By way of comparison, rule 102 of the Rules of Conduct of the AICPA says that an accountant "engaged in the practice of *public* accounting . . . shall not subordinate his judgment to others" (emphasis added). Ethical Consideration 5-24 of the lawyers' Code of Professional Responsibility goes further, to include all lawyers, whether in private practice or employed. It says:

> Although a lawyer may be employed by a business corporation with non-lawyers serving as directors or officers, and they necessarily have the right to make decisions of business policy, a lawyer must decline to accept direction of his professional judgment from any layman.

I have dwelt on this problem because I believe that for a profession to be entitled to that designation it must first be convinced, rank and file as well as leadership, that its members should exercise their wholly independent, honest judgment and that anything less should be grounds for discipline.

I shall now refer briefly to the history and structure of legal ethics for lawyers in the United States. Until well into the twentieth century, in many states, anyone who wished could become a lawyer simply by announcing that he was one, regardless of education or training. During a substantial part of our history, this was considered a right of every citizen—an aspect of Jacksonian Democracy. It was not until the 1870's that the American Bar Association was even organized. The enactment of licensing requirements for lawyers and the organization of bar associations then went more or less hand in hand. Each must have helped the other; by the second third of the twentieth century licensing requirements were universal, and a substantial number of bar associations were engaged in public activity.

Licensing requirements for lawyers, which under our federal system are enacted by the states, include formal educational requirements, the passing of a broad-based bar examination, and approval by a character committee. To date there are no requirements of continued professional training in order for a lawyer to maintain his license, but there are proposals pending now to mandate continuing legal education throughout a lawyer's career and even perhaps to require periodic recertification. Maintenance of competence has, I fear, been left too much to the individual lawyer. On the other hand, it has long been the law that a lawyer may lose his license (i.e., be disbarred) for violations of the ethical rules of the profession; and there is no doubt that the licensing requirements have provided the framework for the enforcement of disciplinary rules.

Your *Transactions* properly recognize again and again the importance of a licensing procedure as a basis for professional regulation. Perhaps the enrollment regulations to be promulgated by the secretary of labor under the pension reform act of 1974 will help. I recognize the difficulties in the way of licensing, however desirable it may be to professional standing; but persistent efforts to establish and enforce voluntary standards, such as those of this Society, are also very important as an impetus toward licensing laws.

In this connection, it is worth recalling that practitioners in professions or trades characteristically have resisted government licensing or regulation. I suggest, however, that they have also generally recognized that they have been the better for it, once licensing or regulation has been in effect for a time. What lawyer would wish to return to the days when anyone could hang out his own shingle?

The first effort on a formal basis to supplement lawyers' licensing requirements with enforceable standards of conduct and competence was

in 1908, when the American Bar Association adopted thirty-two Canons of Professional Ethics. Much later, Chief Justice Harlan Fiske Stone urged that there be a reappraisal of lawyers' functions vis-à-vis the public interest and said that the appraisal

> must pass beyong the petty details of form and manners which have been so largely the subject of our codes of ethics, to more fundamental consideration of the way in which our professional activities affect the welfare of society as a whole.

In 1964, when Mr. Justice Lewis Powell was president of the American Bar Association, he initiated just such a reappraisal, and, effective January 1, 1970, the House of Delegates of the American Bar Association adopted the Code of Professional Responsibility and recommended it to the states for adoption. All but two or three of the states have adopted it, and it is in most places the law as far as the disciplining of lawyers is concerned. It took a long time to achieve such a code, and it is still not ideal; if it were adequately enforced, however, the lawyers of America could stand quite tall.

The basic problem is that under our federal system the licensing of lawyers and their discipline is left to the states, and enforcement is spotty. It is, however, a hopeful and significant fact that the inquiries by lawyers and by state disciplinary committees for interpretation of the code by the American Bar Association Ethics Committee now run to over one hundred per month, and most of these are from concerned lawyers who are asking whether or not a particular proposed course of conduct would be ethical. Most questions are answered orally, but the committee has issued 1,296 written Informal Opinions in response to specific fact situations and 336 written Formal Opinions dealing with ethical aspects of whole areas of legal practice. Additional opinions are issued by state bar ethics committees.

There is a court-administered procedure in every state, predicated on the code, for the disbarment, suspension, or censure of lawyers who violate the disciplinary rules, and a substantial number of lawyers are so punished every year.

The lawyers' code of course emphasizes competence, integrity, and, as I have mentioned before, complete independence of professional judgment. It also covers such matters as publicity, confidentiality, and the avoidance of conflicts of interest. You will recall, however, from what I said earlier that the address of Chief Justice Stone which provided the impetus for the reappraisal which led to the present code was directed toward "more

fundamental consideration of the way in which our professional activities affect the welfare of society as a whole."

I shall shortly mention two items, of possible special interest to you, as examples of the bar's response to this call for public responsibility; but before doing so, I will list some of the current work in which the organized bar is deeply engaged. In addition to the countless public projects within their jurisdictions in which state and local bar organizations are engaged, the American Bar Association and its affiliates, at a cost this year running upwards of $10,000,000, are working on improvements in the correctional system; standards of juvenile justice; legal rights of the mentally disabled; a vast nationwide program of continuing education for lawyers; consumer rights; how to teach professional responsibility in the law schools; election reform; schools for new judges, and many other efforts to improve the administration of justice and the implementation of our form of government. Indeed, the Twenty-fifth Amendment to the Constitution itself, which enabled President Ford to be named vice-president and thereby avoided a vacancy in that office, was largely the work of the American Bar Association.

The first of the two specific items indicative of the bar's attitude toward public responsibility, to which I call attention, is Formal Opinion 335 of the Ethics Committee, published earlier this year. It dealt with the extent to which an attorney must himself check out the facts on the basis of which he is asked by a client to issue an opinion on whether a proposed secondary distribution of unregistered securities is exempt from the requirements of the Securities Act of 1933. Since such letters are in fact commonly used as "selling documents" by the clients, they can have substantial effect on prospective investors, and Opinion 335 therefore involved the issue whether lawyers writing such opinions should give heed only to their client's interests. The opinion concluded:

> The steps reasonably required of the lawyer in making his investigation must be commensurate with the circumstances under which he is called upon to render the opinion, but he must bear in mind that his responsibility is to render to the client his considered, independent opinion whether, having made at least inquiries such as those suggested by the above guidelines, the claimed exemption is or is not available under the law. While the responsibility of the lawyer is to his client, he must not be oblivious of the extent to which others may be affected if he is derelict in fulfilling that responsibility.

The second specific item indicative of the emphasis within the bar on public responsibility is reflected in the very first sentence of the code,

which reads as follows:

> EC 1-1. A basic tenet of the professional responsibility of lawyers is that every person in our society should have ready access to the independent professional services of a lawyer of integrity and competence.

A very large part of the energies of the organized bar is being devoted to ways and means of achieving this objective for the people in our country who cannot afford to pay the cost of legal services they need. Most of you are aware that prepaid legal insurance seems to offer the best hope of providing adequate legal services, in a way they can afford, to the large and vital segment of our population that is in the middle or lower-middle income range. Although prepaid legal insurance raises difficult problems within the legal profession for both ethical and practical reasons, it is far down the road toward resolving them. I am advised that there are also difficult actuarial problems, which I hope you will try to overcome, because provision of such insurance seems so very important if adequate legal services are to be made available to all our people.

Finally, before you ask me the inevitable question, I am going to ask it of myself: "What business does any lawyer have to talk about ethics in the light of Watergate?"

Preliminarily, most lawyers are totally dissatisfied with the excuse that almost all the members of the bar involved had never practiced law to any substantial extent and performed their misdeeds when not engaged in the practice of law. The response of the American Bar Association Ethics Committee to this latter argument was Formal Opinion 336, issued in June, which concluded:

> As stated in Ethical Consideration 1-2, the "public should be protected from those who are not qualified to be lawyers by reason of a deficiency in . . . moral standards." It would be utterly incongruous with the entire tenor of the code to find that its provisions regarding lawyers who engage in fraud, deceit, misrepresentation, or illegal conduct involving moral turpitude do not apply to them when they are acting as individuals or as public servants.

As you know, the lawyer defendants convicted in Watergate matters either have already been disbarred or are before the appropriate disciplinary committees at the present time. Incidentally, while conviction of such crimes means automatic disbarment in most states, the rules in the code provide higher standards than the criminal laws, and a lawyer may be disbarred even though not convicted of a crime.

The real view of many leaders of the bar, and I think of much of the rank and file as well, is that the extent to which the Watergate episodes have tarred the legal profession should inspire lawyers, as day-to-day

counselors of so many of our people, to fulfill a responsibility to help lead the way to a return to higher standards, not only of compliance with legal ethics but also of morality throughout our society.

For almost three decades too many of us Americans, whatever our roles, have had it all our own way. We have played with life as though more profit or publicity or selfish self-satisfaction were its own reward and the only reward worth having, and the devil take the hindmost. "Nice guys finish last" has been too popular a wisecrack. We have heard too often: "The bottom line is all that counts." As the 1960's passed into history, the unscrupulous seemed to do the best at almost every level. In the words of Professor Norval Morris of the University of Chicago, it became the fashion to "wheedle here, clip there, overestimate elsewhere, take a fictitious tax break or more, and support the tawdry structure of the cheap, smart and selfish." Camelot became more physical than spiritual.

What has been proposed to the bar is based on the fact that the lawyer, more than anyone else, is a counselor of other people in all walks of life. In that role almost every lawyer has the opportunity almost every day, in one context or another, to separate what is honest from what is questionable or false—to urge what is really right. I hope very much that a few years hence, when they look back on the disgrace of Watergate, thoughtful observers will have good reason to note that our profession reacted not by rationalizations and petty disputations but by renewed emphasis on its public responsibilities.

MR. EDWIN J. HOLMAN:* Can we achieve agreement to start with on the nature of our subject? We can agree that a professional is one who practices a profession. But what is a profession? Medicine, law, and the ministry have been called the learned professions. But much more recently other groups have also been called professions. Do you agree that teaching, the military, politics, psychology, marriage counseling, banking, and opticianry are professions? Is police science, police administration, or walking a beat a profession? Which groups would you add to the list of professions? Which ones would you delete?

Can we agree that a profession is a vocation which demands special education and knowledge and provides a special kind of service that the patient or client or consumer is not able to provide for himself—a service that cannot be weighed, measured, or physically seen or evaluated in advance by the prospective user? A profession is a vocation which places

* Mr. Holman, not a member of the Society, is secretary of the Judicial Council of the American Medical Association.

these services first; financial gain is secondary. Overriding all is recognition of the fact that the user of professional service places his trust in the professional.

The concept of trust is the sine qua non of professionalism. The profession, as a profession, tacitly promises the individual who uses its professional services that the member of the profession who provides the service is qualified to provide competently the service requested. This promise of the profession is an integral part of the profession. Without it the profession becomes a craft or a trade.

Because of the tacit promise of the profession to ensure the competence of its members, society has permitted the professions to establish and maintain their own systems of self-government. *Intra*professional discipline is the manifestation of one aspect of that self-government. Another aspect is the establishment of curricula in professional schools. Licensure, although a function of state government and in derogation of self-government, is administered by members of the profession. In the exercise of their governmental duties, professionals utilize professional knowledge and techniques.

To maintain the right of self-government—which is in the interest of the public and the profession—it is necessary to maintain the high standard that the public's trust in the profession demands. The professional is frequently the only one able to ascertain the existence of unacceptable or bad conduct on the part of a fellow professional. Only a fellow professional can distinguish between professionally unacceptable conduct and acceptable conduct which is not satisfactory or helpful to the recipient of the service.

### MEDICINE AND SELF-DISCIPLINE

Over the years medicine has established a highly refined system of self-government. The profession screens applicants for professional schooling. It determines the curriculum and approves the instructor for the neophyte. It prepares and administers the examination which separates the applicants from the Aesculapian. It then, at three levels, watches over the conduct of the member and disciplines the member when necessary.

The first level of discipline in medicine is within the medical society itself. Although not all physicians belong to medical societies, the majority of practicing physicians do. By and large, in the scheme of medical organization, a physician becomes a part of "organized medicine" by joining the county medical society in the county where he maintains his office and conducts his practice. He is amenable, of course, to the rules of that local society, to the policy of the state medical association, and to

the Principles of Medical Ethics of the American Medical Association.[1] These Principles have been adopted by state and county medical societies and are the guide to good conduct, against which alleged aberrant conduct is compared. Charges of bad conduct are reduced to allegations of conduct contrary to the Principles of Medical Ethics.

The accused is entitled to due process. He is entitled to a copy of the charges against him; to adequate notice of a hearing on these charges; to examine witnesses; to present his defense; and to a prompt decision after the hearing is concluded. Should he be found guilty he may be reprimanded, suspended, or expelled from the society. (Laws being what they are, medical society discipline is not permitted to spill over into non-medical society affairs. Hospital staff privileges no longer are contingent on medical staff memberships.)

Practically, the effect of county society discipline is to cut the member off from the tangible, and perhaps from the intangible, benefits accruing from that membership: privileges of the library, the dining room, the emergency call service, the annual tour of the society, access, as an author, to pages of its bulletin or journal. Indirectly it may mean more. In the words of the Oath of Hippocrates, "as long as I observe this oath may it be granted to me that I be respected by all men at all times. But, if I trespass and violate this oath may the reverse be my lot." The loss of the respect and the approbation of one's peers is truly an awesome punishment.

The next level of self-discipline in the medical profession is found in the hospital. In terms of results, this is an entirely different type of discipline. It relates chiefly to competence. In your profession I suppose it is the same as in medicine. Once an individual is accepted into the profession, no limitation is placed on the type or extent of practice which he may elect to follow. Technically, after licensure, a physician may go into any specialty he wishes. Legally he may engage in brain surgery or give cobalt therapy. However, no hospital I know of would permit him to do so until he had demonstrated training and competence in a particular area.

[1] These Principles were the raison d'être of the association, which was founded in 1847 to draft a code of ethics and to improve the quality of medical education. A code of ethics was drafted at that time. Although modified from time to time, that code remained until 1957. In that year the current Principles of Medical Ethics were adopted. They are supplemented by a booklet entitled *Opinions and Reports of the Judicial Council*. This body is the Committee on Ethics of the association. As these Principles were being discussed by the membership prior to their adoption, they were also being reviewed by a number of theologians. It was agreed by these members of a different profession that the Preamble and ten of the Principles were indeed ethical principles.

The hospital has become the watchdog of medical practice over the years by the insistence of its doctors that certain rules for the protection of patients be observed. Records of the care and treatment of hospital patients must be completed within a prescribed length of time. Tissue removed during surgery must be scrutinized by the hospital's pathologist. Records not maintained up to date and removal of too many organs which disclose no pathology are grounds for restriction of hospital privileges. Rules "regulating" a physician's practicing in the hospital are drawn up by the hospital's medical staff—the organization of all the physicians admitted to practice in the hospital. (The governing body of the hospital has final jurisdiction regarding both the rules thus established and the enforcement of those rules.)

Hospital staff privileges are essential to most medical practice. Few physicians can engage in an office practice that meets the medical needs of patients or the economic needs of the physician. (Of course, some specialties such as allergy and dermatology are exceptions to this statement, just as the specialty of anesthesiology irrefutably supports it.)

The medical staff of the hospital, like the county medical society, can conduct hearings, again ensuring that the accused is accorded due process. If the charges are sustained, the erring physician may be reprimanded, suspended, or expelled from the staff. The usual penalty is suspension. The physician is denied the privilege of admitting patients to the hospital. Obviously this is a severe punishment. He may be called upon to ask colleagues to care for patients who must be hospitalized. This entails an economic loss and may wound his pride, and conceivably might cause him to suffer the loss of a patient or two. Expulsion itself is drastic and is infrequently employed. When it is, the profession has taken a severe and awesome step to keep faith with the public.

Finally, the ultimate avenue of discipline in medicine lies in the state board of medical examiners or, in the state of Washington, the medical disciplinary board. Here physicians who represent the medical profession *and* the state hear and determine charges against physicians who are accused of violating the medical practice act of the state. This "act," the statute of the state regulating the practice of the profession strictly from the governmental, as opposed to the professional, point of view, lists the "offenses" that are punishable under state law and which, when proved, can result in the ultimate penalty—loss of license. Each state has its own practice act. Each state, through its own medical practice act, demonstrates that the concept of states' rights is not completely dead.

There are more than ninety statutory grounds for medical discipline. Either the states are saying the same thing in different ways or acts

unprofessional in one state are not unprofessional in another. No one ground, stated in essentially the same words, is to be found in all acts, and no law contains all grounds. Eight grounds are repeated in 30 or more states: drug addiction, 47; unprofessional conduct, 45; fraud in connection with examination or licensure, 44; alcoholism, 42; advertising, 40; conviction of a felony, 38; conviction of an offense involving moral turpitude, 36; mental incapacity, 33.

Obviously this level of discipline is the most severe. It can result not only in reprimand or censure but also in suspension or expulsion from practice. Literally, one may be "drummed out of the corps" by action of the board of medical examiners.

Let me recapitulate: medical society discipline relates to ethical conduct, hospital discipline relates to competence, and board of medical examiners (medical practice act) discipline relates to crass misconduct said by the state, with advice from the profession, to be unprofessional to the extent that the individual may be stripped of his right to practice as a professional.

### REFLECTIONS

Despite the fact that there are three levels of discipline in the medical profession and despite the high state of the art, medical discipline has many critics. Most of them are in the profession. Several points are worth noting, however.

The fundamental purpose of professional discipline (to correct), the Damoclean nature of publicity, and the paternalism of a profession must be taken into consideration in reviewing and evaluating professional discipline.

In any profession, discipline is not normally and should seldom be punitive. Its purpose is to correct. No good is served if an intellectually capable, well-trained individual is expelled from a profession. The many years of training to achieve professional status and the experience gained in professional practice go for naught when the professional is expelled from the profession. The public suffers the loss of a needed servant. Professional discipline must direct itself primarily to correction of unacceptable conduct, to education, or to rehabilitation. The individual who errs should be brought back into the fold where his talents can further the goals of his profession, that is, to provide special service to man.

Publicity is a two-edged sword. Obviously, because society reposes its trust in the professions, the professions must report from time to time on their stewardships. (Even amateur athletics recognizes the value of reports to show that punishment is meted out to those who do not keep faith with the public.) But trust demands confidence. If reports of discipline disturb

or shake confidence, is the public being served? What good or harm results from a newspaper story that details, even without names, the disciplinary actions of a county medical society or a hospital medical staff during the past year? This is a most important question. Its answer will vary with the facts of particular cases.

There is a degree of paternalism in all professions. To a large extent it is good. It is ad hoc; it is summary and swift. Usually it is most effective. Paternal discipline is just that. The professional in charge, seeing one for whom he is responsible commit error, takes action immediately. The chief of service of a hospital may find one of the physicians following an outmoded procedure or clearly using the wrong therapy. The chief, in a manner depending on his own personality, calls attention to the deficiency and, to make the point dramatic and memorable, imposes an intramural sanction of one sort or another.

### CONCLUSION

All in all, professions do have the means to maintain high standards. These means can be used with little or no difficulty from the mechanical or administrative point of view. Discipline becomes difficult when it is personalized. When the professional minimizes bad conduct, when he rationalizes bad conduct of a peer, when he says, "There but for the grace of God stand I," he performs a disservice to his peer, to his profession, and to the public.

Although *all* professions are improperly tolerant and always hopeful that the situation will take care of itself, how can the professional who loves and respects his profession and all it stands for tolerate the renegade whose conduct reduces the status of the profession, subjecting it to the rules and regulations of the marketplace? In sum, it is up to the professional, by his devotion to his profession, to maintain its high standards. This is a nondelegable function.

MR. JOHN C. MAYNARD: I should like to begin by asking an obvious question: "Is it important to maintain high standards in the actuarial profession?" The question seems to call for an obvious answer in the affirmative, but, for those who may not see it in this way, it is worthwhile to cast a questioning glance at our responsibilities. Our members keep watch over the financing of the insurance and pension programs on this continent. If this watch is not kept well, it may not be noticed immediately, but the result may be that people are denied some of the benefits on which they have relied. This is a considerable responsibility for 4,500 members to bear. High standards are important.

High standards in a profession today are important for another reason.

Arnold Toynbee is known for his interpretation of history according to the theory of challenge and response. One way of looking at modern history is to regard it as a sequence of growing challenges which are being met by inadequate responses from our systems of government, education, and business. The professions are expected to direct themselves toward effective performance, and society may have to look more and more to the professions for solutions to its problems. The actuarial profession is based on the techniques of problem-solving, and our response should be to look to our standards.

If high standards are to be maintained in the actuarial profession, then good performance will be needed through a whole list of varied and related activities—education, examinations, continuing education, exchange of information, determination of principles and practices, motivation to high levels of professional conduct, and handling of complaints and discipline. While resolving not to be complacent, I believe that the actuarial profession today scores rather well on most of the activities on this list.

Uniquely among the professions, our education and examination systems have not proliferated. We have only two systems on this continent, those of the Society of Actuaries and the Casualty Actuarial Society, and these two systems have come closer together in the past few years by extension of their common core. Being a small and growing profession and one which faces many demands, I believe we have been wise to concentrate the efforts of our limited manpower on making these two systems effective. In order to do so, we have had to work hard in two essential ways: to be responsive to change and to maintain high standards. Within the limits of practical attainment, I am convinced that until now we have been highly successful in both of these. The maintenance and the quality of our education and examination systems should be a source of pride to our members, but they should not be taken for granted.

The idea of continuing education was introduced formally to the Society in 1967. It has been a good idea, and the committee which has developed it has become a strong coordinating force in the work of the profession. Subcommittees continuously review developments in assigned areas, and this leads to research, papers, program topics and special meetings, changes in student education, and the growth of actuarial literature. Today we may well wonder how we ever managed to get along without a Committee on Continuing Education.

Actuaries should have no difficulty in exchanging information. We have voluminous permanent publications, several newsletters, and meet-

ings which have become elaborate and full of choices for the individual. For a quiet profession, we seem to need a great many words. Perhaps a topic for continuing education should be learning how to be concise.

It is in the determination of principles and practices, the motivation to good professional conduct, and the handling of complaints and discipline that new thought and new efforts may be needed. Where do we stand today in these matters?

A number of formal steps have been taken. The Constitution of the Society states that one object is to promote the maintenance of high standards of competence and conduct within the actuarial profession. The Constitution also gives the Board of Governors rather extensive powers to investigate complaints and, in the event of misconduct, to take one of several disciplinary actions. Guides to Professional Conduct have been adopted and are meant to assist members in particular situations.

Since 1957 a Committee on Professional Conduct has tried to keep the matter of conduct in full view of the members. Its duties have been to review and add to the Guides and to answer questions directed to it. The Guides have changed little during this period, but additions to them in the form of Opinions of the Committee have been made.

Each of the actuarial bodies has a Committee on Professional Conduct, and coordination between these committees is achieved through a joint committee. It is not always obvious which actuarial body should investigate a complaint, and, if complaints become more numerous, some method of sharing responsibilities may be necessary.

Until recently, the publication of principles and practices had not been attempted, but there have been two developments in the past year. The introduction of the audit guide for the annual statements of stock life insurance companies in the United States under generally accepted accounting principles has given actuaries a new problem in reserve calculation, and one which requires definition. Another problem arises in private pensions and is the need to define the principles the actuary should follow in making valuations. The Academy of Actuaries is grappling with both of these problems. It has issued several recommendations and interpretations on the actuary's responsibilities in GAAP statements and an exposure draft of the first recommendation on pension plan valuations. The Academy has also issued a guide which requires the actuary to follow the recommendations or explain why he is not doing so. The significance of these two steps is that the profession is defining ground rules to which the actuary is expected to conform, rather than permitting him to have all the freedoms which his training and his conscience would permit.

The actuarial profession, however, has not relied primarily on formal steps in its concern for good and competent conduct. It has really relied first on an intensive education and then on the good sense, the good character, and the personal integrity of its members. It is worth reminding ourselves that it will always be so. Actuaries usually face situations which are affected by many factors, and judgments about their performance will be difficult to make. Clear-cut disciplinary decisions can be expected only in obvious cases. We must continue to rely on the capacities and character of our members.

Have the actuarial bodies been successful in their motivations to good conduct and their handling of complaints? I have asked this question of a number of actuaries who have served as officers of the Society or board members in the last twenty years. The answer is clearly yes. There have been few complaints, and those which have arisen usually have been the result of bad taste, ignorance of procedure, and poor judgment rather than of intended malice or dishonesty. The extensive disciplinary powers have been available to be used when needed. Among the same group of people there is less assurance about the present state of affairs and about the future.

What gives rise to this concern today? My interpretation is that actuarial problems are enlarging and changing rapidly. This means, of course, that it is a stimulating time to be alive, but it may also mean that some professional responses may not be as good as one would like. Let us examine some of the changes and new situations which actuaries face.

Actuaries are expected to peer into the future and advise on how to match streams of income and benefit payments. Everyone will agree that there are many new uncertainties about the future, and the actuary's job is more difficult than formerly. He will need all the help he can get from both inside and outside the profession.

The numbers of actuaries are increasing. This means that it is more difficult today than in former times to learn through friendly associations and by example. Perhaps the spirit in the profession is not as strong because of this.

The responsibilities of actuaries are broader, are sometimes not as well defined as they should be, and require more judgment. The actuary's role under GAAP accounting is an example. Not long ago the actuary's responsibility for the reserves of a life insurance company consisted in making sure that the reserves were correctly calculated under the explicit rules for statutory reserves. Today he must also think about reserves for tax purposes and GAAP statements. Could this bring him to a conflict of interest, and would this depend on whether he was employed by the

life insurance company, a consulting actuarial firm, or an accounting firm? Typical of this type of situation is the question, "What should an actuary do if he feels that the preparation of the GAAP statement will lead to an undesirable weakening of the statutory statement?"

The actuary has always dealt with problems which involve many interested parties. In life insurance these are policyholders, shareholders, field force, and staff. However, under today's conditions some of these interests are more outspoken. For example, the needs of shareholders have been a strong force in the development of new kinds of financial statements. Some of the needs of policyholders are held up to public view by those associated with consumerism. The field force and staff are close to the scene of decision and certainly will be heard from. This growing list of pressures may bear upon an actuary's duties, such as policy design and determination of dividend scale, and his duty may not always be clear to him. Consider this question: "What does a life insurance actuary do if he is asked to design policies which he regards as deceptive under the current rules for disclosure and comparison of life insurance costs?"

In the field of private pensions there are the interests of the employer and the employees. The employer wishes to maintain a plan having benefits with which his staff will be satisfied while minimizing his costs and taxes. There are different classes of employees divided into active and retired, and each class expects fair treatment. Under today's conditions, these interests are being expressed more forcefully, and the introduction of new legislation and regulation is an indication of trends in this direction. Consider this question: "What does a pension actuary do if he is asked to make cost estimates under assumptions which he does not believe will ensure the payment of pensions under normal and probable future events?"

Enough has been said to suggest that in the future an actuary will be placed in many different situations. He will be representing one interest in each situation but will be aware of others which may or may not be well represented. Some of these interests may be protected by legislation and regulation. It will be difficult for actuaries to know what is expected of them in some cases. Undoubtedly they will receive help from the Guides to Professional Conduct, the Opinions, the Recommendations, and the Interpretations which the profession is continuing to develop, but will this be enough? It would appear that one of the greatest needs of members will be for practical guidance on the handling of individual problems, and sometimes for support from the profession. What program should be undertaken?

In reply to this question, I submit the simple idea that it will take

"blood, sweat, and tears" in the form of a large effort from the most experienced and wisest members of the profession if we are to maintain our traditionally high standards in conduct and performance in the future.

I shall conclude this discussion by making a number of suggestions which I hope are worthy of further consideration and discussion. First, in private pensions:

1. Continue to define the principles which actuaries use. This is now being done by the Academy in the form of Recommendations and Interpretations of its Committee on Actuarial Principles and Practices in Connection with Pension Plans.
2. Set up a standards committee. It would make available to members surveys of assumptions being used and establish standards for minimum levels of funding for different categories. Some work in this area is being done in the Canadian Institute by its Committee on Private Pensions.
3. Continue to develop Guides to Professional Conduct and Opinions. Arrange for informal guidance to be available to members on specific cases.

Second, in insurance:

1. Continue to define the principles which actuaries use in the preparation of financial statements of life insurance companies. This is now being done by the Academy in the form of Recommendations and Interpretations of its Committee on Financial Reporting Principles.
2. Continue to develop Guides to Professional Conduct and Opinions.

Third, in general:

1. Arrange for discussion of professional conduct at actuarial meetings.
2. Introduce questions on professional conduct into the actuarial examinations.
3. Elaborate on disciplinary procedures by instituting a grievance committee which can deal initially with complaints. If complaints are serious, they are passed on to the Board of Governors.
4. Give more publicity to decisions on disciplinary cases.
5. Keep the officers of the actuarial bodies informed of the professional problems which members face; they should be prepared to support members who have difficulties.

MR. EDWARD H. FRIEND: Many North American consulting actuaries distinguish the actuarial profession from the legal, accounting, and medical professions, asserting that as consulting actuaries we are not professionals but professional businessmen. Two important illustrative bases for this observation are (1) that we allow actuaries to be partners or subordinates in practice with nonactuaries and (2) that we permit advertising (with the sole limitation that it not be self-laudatory).

If the actuarial profession aspires to be in the fine company of the

accounting, legal, and medical professions (and I think it should), do we need to adhere to the basic standards that the legal, accounting, and medical professions have embraced, or are these characteristics not really fundamental to professionalism?

MR. GRAESE: In response to this question, I believe it is necessary to clarify what the Code of Professional Ethics of the AICPA does state, since, as the question is phrased, there appears to be a misunderstanding, and then to give my personal opinions on the subject.

The AICPA does not prohibit affiliation of its members in practice with individuals who are not C.P.A.'s. Affiliations of C.P.A.'s with lawyers exist, as do affiliations with non-C.P.A.'s who are not licensed in any profession. It is my personal opinion that the association of several professional disciplines need not detract from, but could significantly enhance, the professional nature of the services being rendered to the clients of such a firm.

On the other hand, the Code of Professional Ethics does not permit "affiliational subordination" of the C.P.A.'s judgment to that of others. Thus, obviously, if an attorney and a C.P.A. are affiliated in practice, the judgment of the attorney as to matters of law should not be subordinated to the C.P.A.'s, nor should the C.P.A.'s judgment in the expression of an opinion on financial statements be subordinated to that of the attorney.

It is my personal opinion that the future will see a great deal more of the blending of disciplines in a single professional organization in order to render more complete professional services to each client. It must be remembered that the ultimate beneficiary of professional services is the public, and, if the joining together of two professionals of different discipline provides a better means of rendering that service to the public than if the individuals practiced individually, quite clearly the public needs should govern. Nor should there be any presumption that such professional affiliation is likely to subvert the judgment of the professionals in either discipline. Past experience certainly is documentation of this. Multidiscipline teams function effectively in many areas and have done so for many years. I am unaware of how far back in history the joint practice of law and accounting may go in the United States, but I do know that as early as 1883 Mr. Barrow, an actuary, joined with Mr. Guthrie, an accountant, to form a partnership that is now acknowledged to be the start of the first accounting firm organized in the United States.

As to advertising, I feel that again there may be some misunderstanding as to the status of the present rules. The AICPA does consider "advertis-

ing" to be a form of solicitation and, therefore, improper. However, it is re-examining its entire position in this area, so as to clarify what constitutes advertising and the extent to which such standards should perhaps be made less restrictive than at present. I should add that, in at least one state, certain types of advertising are permitted under the state society's code of ethics. It is also interesting to note that the Monopolies Commission in the United Kingdom, in studying the professions a few years ago, challenged the restrictions on advertising as being not in the public interest. I personally do not feel, for example, that a professional card (which is permitted by the legal and medical professions in some geographic areas) is in and of itself unprofessional, and it, in fact, could be in the public interest. Regardless of how the standards in this regard may change, I am sure that the AICPA will continue to insist on high standards of good taste, truthfulness, and the absence of self-laudatory commentary in all matters of public relations.

In the final analysis, I believe that any calling achieves professional status not so much by some of the technical niceties which it may observe but rather by the way in which the calling assumes a responsibility to the interests of the public generally as well as of those who directly avail themselves of their services. It is the recognition of this responsibility to the public and the willingness to discipline its own members when they fail to meet minimum standards that distinguish a true profession from an ordinary service business. I consider this far more important than the interdisciplinary arrangements for practice or the extent of advertising.

MR. TONDEL: As I emphasized in my prepared remarks, I believe that one of the cornerstones of a profession is the independence of judgment of its members. A lawyer's ability to express his individual professional judgment would be impaired were he permitted to share his responsibility with a nonlawyer partner. As I have already indicated, the lawyers' code provides that, even where a lawyer is employed by a business corporation with nonlawyers serving as directors or officers, he must decline to accept direction of his professional judgment from any layman.

With respect to advertising, there is discussion within the legal profession as to whether the ban should be lifted to some extent in order to make it easier for ordinary people to locate appropriate lawyers when they need them in connection with such frequently recurring, ordinary matters as workmen's compensation claims, wills, divorces, and so on. Indeed, the lawyers' code has already been amended by the American Bar association with respect to the use of commercial publicity by legal service organizations formed to make legal services available to the poor

or to persons of low income. The code, as amended this year, now permits such organizations to describe the availability or nature of the legal services they furnish, provided that the publicity does not identify any individual lawyer by name.

MR. HOLMAN: What *is* a professional businessman? When we use the term "professional baseball player," we mean an athlete who possesses and exercises competence in the delivery of personal service for money. In the professions, the individual possesses and exercises competence in the delivery of personal service for a fee to another who reposes complete trust in him, the professional. Trust is the sine qua non of a profession in the sense in which we are using the term. "Professional businessman" suggests a businessman who performs a personal service in some area where trust is not an ingredient.

When used in the traditional sense (see Fall, 1963, issue of *Daedalus*, dedicated to a discussion of the professions) "profession" (and "professional") implies a relationship between two people who because of circumstances are not on an equal footing. The client or patient is disadvantaged because of some misadventure. He calls on the professional to assist him. He puts his trust in the professional. He puts his life or his health or his property or his wealth in the hands of the professional. The professional service sought cannot be measured, seen, inspected or in any way evaluated by the patient or client. This precludes advertising in the usual sense of the word, that is, drawing attention to oneself or to a product. Can one evaluate the skills of an orthopedic surgeon who advertises by banners trailing from an airplane flying over the county fair?

The fact that intangibles are at issue, as well as the inherent dignity of a profession, precludes advertising. As medicine has said, "the best advertising is the development of a reputation for professional ability and fidelity. It is unthinkable that a physician would advertise a special on appendectomies or a lawyer a special on wills or that either should offer "green stamps." To the extent that public education is needed, this should come from the professional society, not from the individual professional.

MR. MAYNARD: I believe that the two practices, advertising and affiliation, were meant to focus attention on giving good professional services to members of the public. The practices originated in professions which are well known, which serve many clients, and whose members are numerous. A competent actuary who desired to do a good job might

not be able to make a living if he did not have some way of making his services known through other professionals or by the printed word. In the end, it is the attitude and conduct of the competent individual that will determine whether his work is done properly. If his attitude is a correct one, then it should not be necessary to have restrictive rules on affiliation and prohibitions on advertising.

CHAIRMAN MYÈRS: It seems to me that the question of whether actuaries are partners or subordinates in practice with nonactuaries and the question of advertising of a dignified nature have nothing whatsoever to do with professionalism. Such external characteristics are mere trappings or show and neither add nor detract from real professionalism. Instead, they seem to be part of what I believe to be the undesirable illusion that some professionals build up, for example, by trying to mystify the client by unintelligible language (or, alternatively, insufficient language) or by refusing to criticize (in a proper and dignified manner, of course) the work of another professional.