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PROFESSIONALISM AND THE ACTUARY

Speaker: DANIEL J. MCCARTHY

Dan McCarthy is a consulting actuary with Milliman and Robertson, Inc., and a member of the Society of Actuaries Board of Governors. He has discussed the issues of professionalism and ethics for the actuary as a facilitator in the Fellowship Admissions Course (FAC).

MR. DANIEL J. MCCARTHY: One day in January 1964, when I was working at Equitable Life, the Society of Actuaries' examination results arrived in the office in the somewhat mysterious way in which that used to happen before you could just dial up in the privacy of your own room and find out what happened. I discovered that I had passed Part 5 of the Society's examinations and was, hence, a new Associate of the SOA. After the hubbub that happens in a sizable company with many people in it, when many examination results are about and there are congratulations or commiserations, depending upon what happened to whom, I settled back down and went back to work. About an hour later there stood in front of my desk Mr. Morton D. Miller.

Now, Morton Miller was a very prominent actuary. For one thing, he had written a book and a paper, both of which were on the syllabus for the examination I had just passed. For another, he was then Vice President of the SOA and was soon to become its President. And third, he was my boss's boss's boss. In later years, I came to know Mort as a very thoughtful and approachable person. In January 1964, it's fair to say that I'd had very little contact with him or he with me, but he got right to the point. He extended his hand, he shook mine, and he said, "Congratulations. Now you are a professional." Now, at the time I did not ask what he meant by that. And I didn't say, "Well, tell me a little about my rights and obligations as a professional." In fact, all I said was, "Thank you," which is all that seemed to be called for, frankly, at the time. But I have thought about that over time since. It's come back to me frequently in my mind, and it's for that reason that I was not only honored, but particularly pleased, when Bob asked me if I would speak about professionalism. From the day I got the first designation, somebody told me that's what I was, and it made an impression.

If you look at the program booklet for this meeting, you will discover that for most of the sessions, there is a statement of the objective of the session, and it's of the form, "At the conclusion of the session, attendees will . . ." and then it says something. For example, for Session 13, it says, "At the conclusion of this session, attendees will better understand how to price multiple life products." There is no statement of objective for this session, and I tried to think, if I were writing one, what it would be. Well, one temptation is to pick an objective that you're fairly certain you can attain. For example, at the conclusion of this session, attendees will be somewhat less hungry than when they came in. But if we were to go a little bit beyond that, I think my goal would be: at the conclusion of this session, attendees will be encouraged to integrate a framework in which each of us (I stress *us*: me, you, us) can think about professionalism from the point of view of our own professional jobs, the situations that we're in right now. I think if we could accomplish that, that would be nice, and if we do accomplish it, it won't be solely or primarily because of anything I'll say here. In reality, it will be, I would say, the sum of probably four things.

First, at the beginning of the day we heard a very provocative opening talk by Barbara Toffler. It was obvious, from the questions, that she sparked our interest. She raised subjects that are important to us, and it became very clear that, to use the old politician's cliché, there are no easy answers. Second, for those of you who participated in it, which I gather is the majority of the people here, there was the professionalism case study. I'll talk about that again a little later, but I hope it emphasized to you, either in participating, if you did, or in at least reading the case, that these issues, although they sometimes sound abstract, are, in fact, very concrete. They come down to particular situations in which decisions have to be made. Third, in a little while, I'll suggest some elements that you might want to consider in a framework. But, the fourth thing I think that will contribute to your understanding is the fundamental decision that Bob Berin made as President, which is to focus on professionalism as one of the key emphases of his presidency and to encourage the program committee to put together the kind of program that we've had thus far in this meeting. Now I think that's a tremendous positive step. I think it gets us thinking about things that we need to think about and all too often don't, and it seems to me that nothing but good can come of that.

Before we go on, I want to say a few words about the FAC. Bob mentioned that I am a facilitator in the course, as are several others here. Many people have participated in it, and I think that the SOA has given us an honor. We have been far away from the examination process and have had the opportunity to join in an educational experiment which, I think, has been an absolutely resounding success. By the way, because they're here, I want to mention in particular Linden Cole who was honored at the last FAC. He was given a plaque as the official FAC guru. And I also would want to mention Nancy Behrens, who, with her enthusiasm as the FAC coordinator, got several generations of actuarial students, now Fellows, who went to the FAC very excited about that prospect. By a show of hands, how many here have been through the FAC as participants? (It's probably about 20–25% of the people in this room.) Linden tells me that at this point, about 20% of the nonretired Fellows of the SOA have been through the FAC. Many still haven't, but before too many years, we will be outnumbered. In fact, Bob has provoked the Society's board to begin discussing the kinds of things that could be done to offer some version of that to people who would like to do it.

The case studies in the FAC, like the one that you participated in earlier have important strengths, but it's also important to recognize some of their limitations. Their strengths are fundamentally two. Rather than just sitting down to read, say, the Code of Professional Conduct, which is a very important document you should read, you actually take a situation that bears some resemblance to real life and apply those ideas and those elements in that situation. Real life is a great teacher, and the case studies are much closer to real life than simply reading the document. The case studies provide the opportunity for feedback from other people. You participate with other people. They think of things you don't think of, you think of things they don't think of, and, as a result, you may wind up at a different point than that which you would have arrived at alone. I've often thought that one of the deficiencies of the process by which people become Fellows of the SOA is that we study alone, we take examinations alone, and yet most of what we do in life we don't do alone as professionals. The FAC has moved us well beyond that, not only in professionalism but also in several other aspects of the program.

What are the limitations? Well, one limitation is that the cases will inevitably be over-simplified. The case this morning took a three-year time horizon and got it into a page-and-a quarter. Now that's essential if you're going to talk about it in 60 minutes, but, nonetheless, I think we recognize that life isn't that way. So the case studies are useful as examples, but they are not a workable substitute for applying lessons as we actually live them out day by day, hour by hour, in real time.

Second, apart from the oversimplification, I think most of us would say that our professional lives don't present themselves neatly to us as a succession of cases, each of which has a beginning and a middle and an end. Haven't you ever had a day when you came home from the office and you said, "Gee, I really worked hard," but if somebody were to ask what you actually did, you might have a little trouble answering the question? You talked to somebody about this or that, you answered the phone, you did this or that—it wasn't necessarily all project-oriented. The case studies, for the sake of teaching points, explore the work of an actuary in defined little categories, and that is not real life. So those are limitations that we need to try to overcome as we apply the lessons of the cases, as we apply the lessons of the Code of Professional Conduct and as we apply what we hear and what we learn about professionalism in real life situations.

I would suggest as a framework that it's helpful to think about projects on which we work professionally in three pieces. Think about them as input, throughput, output. Go back to this morning's case in which I hope you either participated or at least read. The problems in the case, by and large, stem from things that happened in a very short period of time, at the beginning, and three years later people were still living with the consequences of those problems. We had very good discussion about what to do about the consequences of those problems, but, nonetheless, it started in a very short period of time at the beginning. In suggesting that we think about input and throughput and output, I think the 80/20 rule of life applies; that is to say, we probably spend 80% of our time in a typical project involved in throughput, actually doing the work, and yet the professional issues that are presented in that part, as opposed to the beginning and the end, are probably only about 20% of the total.

What do I mean by input? Well, input is when we're first asked to understand what the job is that we are asked to do. What are the circumstances under which we are asked to do it? What are the resources that we have to work with? What are the time constraints? What are the questions that we have to answer? And who at that point is the audience? All of that will determine, to a large measure, the success or failure, the good or bad, the accuracy or the inaccuracy, the relevance or the irrelevance of what we do, and yet it isn't very much of a period of time in relation to the total job.

Think back. I'm sure you could all construct examples. This is not public confession, so I won't disclose mine; you don't have to disclose yours. I'm sure you can all think of a case in which you got involved in some project and you could think back, if only I'd asked this or that at the beginning, or clarified this or that, or said, "We just can't quite do it in that period of time," or dealt with that problem then. The whole thing might have been very different. Input is the point at which many issues emerge which are listed in the Code of Professional Conduct. It may be boring, but it's only about six pages long; it won't take you very long so I hope you read it. That's the point at which those issues begin to emerge. Do I really know what I'm supposed to do? Are there any conflicts that I should deal with at this point? Conflicts take many forms. Those of us in consulting often think about conflicts of interest: client A's interest versus client B's. But conflicts of interest present themselves in many, many forms. We talked in the professionalism session that I was in earlier about just the conflicts of reporting in an organization. Well, who asked you to do the job, and what's going to happen to the work after it goes to those people? Who are they going to give it to? And do they understand? Does the audience two or three times removed understand what you were asked to do? Do you even have a chance to tell them what assumptions you made and why you made them and what the limitations are and why those limitations are there? All that occurs at the start. It's not to say you can get it all resolved at the start—life's not perfect—but at least you have the opportunity at the start to lay out, or at least understand, and perhaps challenge, perhaps document, what it is you've been asked to do.

The middle part, as I've said, is likely to be the most time-consuming, but it is also likely to be the most straightforward. I mean, what the heck? We're actuaries. We know how to do things, right? You get a job. If you have the resources, and if you have everything you need, sure, you may have to make some assumptions, data's not perfect. Work must be checked: why did the computers produce these crazy results? You have all that, but, nonetheless, it's fairly straightforward, and I would suggest to you that, except in the case of extreme carelessness or extreme incompetence, most of the ethical issues, most of the subjects addressed in the Code of Professional Conduct, and most of the kinds of things that we could relate to from what Barbara talked about earlier, don't happen in the actual doing of the work. Eighty percent of the time spent probably won't produce more than 20% of the real problems, provided we just go about our work carefully.

Then we come to output. OK, we're done. What do we do with the result? Who gets it? How do we describe it? Who's going to get it after the people we give it to get it? Who else, other than the people we give it to and the people they give it to, will be affected by it? How can we communicate the relevance, the importance, and the limitations of what we've done? It's been my experience in FAC cases, and it happened again this morning, that when we come down to listing alternatives—what do you do? what's the output?—in this case, you'll recall, people asked a question, you have to give them an answer in the end. How do you go about that? Virtually all of the suggestions that were made as alternative ways to proceed had to do with communication, maybe written, maybe oral, maybe fully disclosing, maybe not, depending upon who was saying it. Go back and ask some questions, tell them they've asked the wrong question, get the right question asked so you can answer that, any number of things, but they are all communication. It's been my experience not only in the cases but in real-life situations that disclosure and the form of communication are really key to communicating with the audience in such a way that some of the problems that are set forth in these cases won't arise.

I do want to point out one thing to you. It applies partly to throughput and partly to output. Our training, for the most part, is training in precision. Oh, sure, we understand that assumptions are subject to error, subject to just misguessing, I shouldn't even say error, misguessing the future, but, nonetheless, we are trained in precision. If we get all the assumptions down, we say, OK, we can get from A to B; if you buy those assumptions, B is the answer. In other words, we are perfectionists. At least we are trained in many respects to be perfectionists. I would suggest to you that in the environment in which we work and with the people with whom we deal, by and large, we are not dealing with perfectionists, and that's appropriate because managerial challenges, corporate governance challenges, and fundamental real-life decisions basically are not decisions in which perfectionism is going to have a part. You're going to have all kinds of issues in front of you, you're going to have competition, you're going to have limitations of resources, you're going to have everything, and a decision will be made in some way to do what some people think is the best they can do. Too often, I think, in striving for completeness of communication, we run the risk of being perceived as sort of irrelevant fuddy-duddies, and that's a key issue. It often contributes to the marginalizing of actuaries as corporate senior officers, as corporate advisors, whatever. So a real challenge that we have, from the point of view of communication, is not to disregard what's important, but to find ways of communicating that will be relevant to that audience but that are still professionally solid. I think that's a big challenge. It's the challenge at the output part of what we're doing, when we have to focus on the audience, when we have to say, who's going to look at this?, when we are in a situation and four other actuaries representing four other different parties are all going to look at it. All of that matters, and all of that goes to communication. We frequently don't do a great job of that, but if we can do it better, I think we will wind up looking like better professionals and will create fewer ethical problems for ourselves.

Now in that context there's a particular issue that I'd like to talk with you about. I thought about it recently because when I got the first ballot material for the SOA elections this year, this was alluded to in one way or another by two or three of the candidates who set forth their views for our consideration. For the moment I'm focusing on actuaries who work either as consultants or for insurers and related kinds of entities. In particular, I'm not focusing on actuaries who make their living as regulators, an important group of people, but the challenge I want to present to you doesn't apply in the same way to that group. There has been a kind of schizophrenia in the actuarial profession as to whether the actuary is a member of or advisor to management or whether the actuary is sort of the closet representative of the regulator or the traffic cop.

Barbara talked earlier about the fact that compliance is on everybody's list nowadays. She gave some reasons. There are also reasons other than the ones she gave. It's certainly a time in which compliance is important, but I think we need to think very carefully about exactly what our role is. Many of us sign actuarial opinions that go to regulators in one form or another, whether it be a 5500 Schedule B, whether it be an annual statement, or whether it be an opinion about a projected loss ratio. We generate opinions that are relevant in regulated industries in which we work. They are sent to regulators, and they must be right. I don't think there's too much debate about that. Are we beyond that, somehow specially anointed to be the corporate conscience, or are we simply participants as officers, advisors, whatever, to an organization that has its own need to be an appropriate corporate citizen, to comply, etc., and our role is simply there with a particular piece of knowledge, a particular background about the industry, but not the industry's conscience? That's a very tough challenge. People have gone, I think, to either extreme on that. In fact, we had some interesting discussion in the case this morning about people who had taken off the actuary's hat, which is almost like saying, well, don't bother me with that stuff, I'm not going to pretend I'm an actuary anymore. It is a significant dilemma as to where we place ourselves on that spectrum. On the one hand we're simply with management like anybody else, and on the other hand, we're somehow with the regulator.

I think one of the keys to that goes back to the input stage of the input/throughput/output that I'm talking about. That is to say, if we need to bring to people's attention legitimate issues—gotta do it in the end, gotta do it—because of our training, we may recognize those issues before other people do, and that may make us unpopular. Timing has a lot to do with how well that message will be accepted. If you must say, for example, on February 26 or 27, "Sorry, guys, the reserves aren't right, we must put in $x more for this thing we're going to file tomorrow," you will not be a popular person, and you don't deserve to be. On the other hand, if, as a member of or advisor to management, you identify a problem early, you begin warning people early, you get the issue out in the open, you give time for acceptance. I still won't tell you you'll be the favorite person but you have a better chance of being effective and of being accepted. I think we have much to learn in that regard. Too often it has been our tradition as a profession, in the legitimate interest at being ethical, to sort of put the actuarial cloak on and say, "Well, it's right because I'm the actuary, and I say so, and I'm the special person here." Between that on the one hand and ignoring legitimate issues on the other hand is a fairly wide range of activity in which we, as individuals must pick our spots with the guidance that we get from the profession and remembering that we have a disciplinary process out there looking over our shoulders. That's a challenge that we can't simply look at once and then have it go away. We look at it basically everyday. You may not stop to think about it every day. I don't think you wake up every morning and say, "How am I going to deal with my professional life?" You can't revisit that everyday, but if you have a framework in which to think about it, it will then turn out, I would argue, that over time you'll modify the framework. Your job may change, your situation may change, whatever, but you stand a better chance of being viewed as and being an ethical person and being an effective member of or advisor to management.

For a number of years I was actuarial advisor for a small life insurance company whose president had a marketing background but who was numerically inclined. Therefore, he thought that he might not know all the formulas, is the way he would put it, but he really knew what the numbers ought to be because, after all, he knew the company better than anybody else. Well, he never thought the statutory reserves were right, he never thought the GAAP reserves were right, and, needless to say, he always knew the direction in which they should go. In the following year it would generally be demonstrated that the numbers we had the prior year-end were probably accurate, but there was always a reason why this year was different, and this year the numbers are wrong. Yet, oddly enough, and it took me a long time to understand this, he put up with both the company's actuary and me, in the end saying, "Ah, these are really the numbers," or sometimes finding a legitimate error and fixing it but then saying, "OK, this as amended are the numbers." Somehow we survived in that environment for much longer than I expected that either of us would, and I think the reason in the end was that these conversations didn't typically start in the third week in February. They might typically start in the third week in November. So we'd have a chance to butt heads and bash it out and argue about it, and he, if not convinced, was at least willing to be browbeaten a little bit, and somehow we could survive. The company doesn't exist anymore, by the way, but at least it was solvent when it was acquired.

I don't want to suggest for a minute that every situation of professional conflict has a happy ending. Some people in this profession have walked away from jobs because they understood that was the only choice available to them. Most of us haven't had to face that. When it happens, it can be very difficult. In some situations consultants have walked away from clients for the same reason. If you have more than one client, you could say that's not quite the same problem, and perhaps it isn't, but nonetheless, it's tough, too, because there are situations in which life just won't treat us fairly. But I would suggest to you that if we focus at the beginning of a job on all its consequences, in the middle of a job on doing it accurately, and at the end of the job on communicating it well, and if we remember that 20% at the beginning and the end is 80% of the real issue, and the 80% of the middle is very important but is only 20% of the real issue, I think we'll have a chance of being accepted, having our advice accepted, and being viewed at the same time, not as an outsider whose message we have to listen to now and then but really don't want to, but as part of a team.

In February 1965, about a year after the occasion that I described at the beginning of this talk, I was called into a meeting with the very same Mr. Miller and three of his direct reports, and they were in the process at the time of setting the company's group insurance dividend formula for the forthcoming year. The key issue in that exercise was setting the formula for expense charges that would be applied to a whole range of different policyholders, a very disparate group, due to different kinds of coverage, different kinds of service we provided, and different kinds of risks. This was a challenge. I was called in because I had been asked to produce a particular piece of expense analysis, which I presented, and the conversation then turned, almost as though I weren't there, to, "OK, what do we do now? What are the issues involved in setting the range of expense charges for this year?" And, as is always the case, discussion in that case turns to, "Who are our major clients? What are our costs of doing business for them? And what are the possible consequences if we hit the expenses too hard against them?" And it occurred that Mort's three direct reports suddenly became very uncomfortable that I was in the room. I was the kid. One of them suggested to Mort that perhaps I didn't really need to be there anymore. "He's made his report." Mort had an interesting outlook. He said, first of all, "Let him stay, he has to learn how this happens." But then he turned to me and said, "In a situation such as this, the key issue is that we have a number of very large customers. They pay a great deal of the overhead of this organization, and if we take an action that has the effect of turning some of these customers away, all that will really happen is that we'll have approximately the same overhead to spread over a smaller base of remaining customers, and essentially nobody will have won." He said that's the environment in which we deal with this question. I had been focusing, of course, presumably as I had been asked to, on throughput. He was focusing on input and output. He was focusing on the boundary conditions that defined the job at the beginning. He was focusing on what would happen at the end, to whom it had to be communicated, and who all the stakeholders were. In that context he basically enunciated a framework in which you have to reach a fair decision. There's the ethical and professional side of it, but you have to reach a decision that has business reality associated with it, and that to me was a further step along the line, apart from his simply telling me that I was professional, in my professional education.

Let me conclude. First, think seriously, as Barbara encouraged us to, about professionalism and its meaning to us. She enunciated the hallmarks of professionalism. She pointed out that we meet them. Let's not forget that. Second, think about the business realities in which we work. We are not, for the most part, academicians. We do not work in an ivory tower situation—academics would say they don't either, by the way—but in particular, we work in a business context in which fundamental ideas of right and wrong have to be melded into, not overcome by, business issues. Think about the input/throughput/output way of analyzing a job because all that is really important or most of what is really important happens at the beginning and the end. If you blow that, it doesn't matter how good a job you did, and if you do that well, that won't overcome incompetence, nor should it, but you stand a much better chance of having an appreciative audience for a professional work product.

MR. CHARLES BARRY H. WATSON: It seems to me that Barbara Toffler's speech referred directly to the general question of business and corporate ethics, and we heard you talk about professionalism and professional ethics. Do you see any differences between the problems raised by corporate ethics, in general, as opposed to professional ethics in specific, and do you see any differences that that leads to in terms of how we should respond to ethical problems?

MR. MCCARTHY: Good question. I think that the issues are often much the same, but I think there's one difference in the context. If you read the Code of Professional Conduct, the standards of practice, or any of the things that we have to look at that tell us about what an actuarial work product ought to be and how we ought to behave as actuaries, you will see that there is essentially no discussion of corporate entities in it. People say the actuary should do this, the actuary should do that, the actuary should not do this, the actuary should not do that. So the focus in the first instance on professional ethics is a focus on individuals, and in that sense the context is different, but, as I said, we work within a business context. We don't work in a relationship, for the most part, solely of one isolated professional to one isolated client. We work very much within a business context, and I think that some of the issues of which I'm personally aware, in which actuaries have essentially walked away from a business situation, came about because they saw that conflict between their obligations as an individual and the behavior of the corporation. Now that's not limited to actuaries. There have been all kinds of cases in American corporate life and government as well, particularly in the last decade or so, of whistle-blowers who were in various situations. I said before that I don't think the actuary's responsibility is somehow unique or on a higher plateau, but, nonetheless, we are serving as professionals, and that balance of our individual obligation is a little bit different, I think, from the general subject of corporate ethics, though it gets played out within a corporate environment for the most part.

One of the things that I would point to that may identify a specific difference is the question of conflict of interest. This is an issue, particularly, as I said, for consulting firms where you have to be very concerned about whether individuals (or perhaps even the firm) are representing organizations with disparate interests. But it's also a real issue within a corporation. Who really is your boss? If you can answer that question, are there other people in the corporation to whom you have an obligation of disclosure besides your boss? And do they have the same interests that your boss does? These are real questions, and they are very tough to live out.

FROM THE FLOOR: Dan, you talked about whether we're going to be regulators. I don't think I'd quite use that language, but, just to note, the Canadian Institute seems to have decided very firmly that it's on one side of the fence regarding that issue. We even asked the Parliament to put into the law that we do have this obligation ultimately to the regulator. I'm not here to preach that it should be the case in the U.S., because we don't often appreciate that there are differences in national cultures that affect our whole approach to everything, including the legal system. I'm not advocating any of that. One thing that I want to raise with you is with respect to actuaries versus other professionals, though. In many jurisdictions—I think it's probably true here, too—legal firms and accounting firms can't incorporate. They have to be partnerships.

MR. MCCARTHY: That's true, although in the U.S. the limited liability partnership has been invented, and from a liability point of view it creates something like a corporate situation.

FROM THE FLOOR: But part of the intention, I think, of the people who originally said that was that the partners are liable, and, in some sense, everybody is the guardian of his or her partner's ethics. The firm as a whole, all the members, are responsible. I'm not sure what the structure of Milliman & Robertson is, but I know that I'm a member of probably a larger consulting firm, which is wholly owned by a larger broker, and sometimes I have to wonder, are we as professional just by that very fact, or are we less professional than some of our accounting firm colleagues? The fact that we can be an incorporated company and yet a major consulting firm, does that say anything about what society is saying about us compared with what it's saying about lawyers and accountants?

MR. MCCARTHY: I think that's a good question. I'm going to pass over, as you did really, the U.S./Canadian difference and just focus on the other part of your question. Milliman & Robertson, by the way, is a corporation, and is owned by practitioners who work in it, not by an outside entity. But I think that the development of the limited liability partnership concept in the U.S. makes a lot of sense. Let's face it. If any consulting organization, and I'll treat law firms and so forth as consulting organizations for this purpose, were to be damaged to an extent that its entire corporate resources were wiped out, I frankly think that is adequate punishment without going after the pocketbooks of the individuals.

I would argue the same for actuaries who work in insurance companies. They don't own the companies by and large. I know of a few actuaries who own companies, but that's kind of the exception. So they are working for an entity that is owned by somebody else, and it seems to me that in some cases that may possibly make our obligation as individuals a little harder to live up to in certain conflict situations, but I don't think it changes the fundamental obligation. I will say, in dealing with consulting firms of different structures, I've never sensed a lack of professionalism there. So it may be a potential issue. I haven't seen it in practice, and it certainly, in my view, doesn't change our fundamental obligation as professionals.

MR. BARNET N. BERIN: I think I recognize that consulting firm that was described, and as of several years ago, that firm probably put more effort, more funds, and more time into being professional, having professional standards committees, and peer review.

I'd like to mention something that has happened in the last 12 months and see if anyone has a reaction. Those of you who are consultants should be very disturbed by this sequence of events. I was in the new South Africa, and I was very impressed with the people's attitude, their turnout, and their esprit de corps. Their contributions to the changeover for the actuarial profession in South Africa was a distinct part of the changeover, but that's not the point. One of the actuaries reviewed all the pension valuation reports filed with the regulators in the prior 12 months and determined that about 29% of them were deficient. I was not in Hong Kong, but my Canadian friends tell me that a similar presentation was made in Hong Kong for pension reports, and the error rate or the deficiency rate was that approximately 25–30% of them were unsatisfactory. So why in the pension consulting business, in these two independent and separate situations, was the deficiency rate so high? The answers I've heard are all disturbing and I'd like to get your reaction. The answer I heard is, "Well, the pension actuary has very many steps broken down in the process from input to output, and some of them require filings. A lot of individual work must be done. Some of the firms are small. Some of the peer review processes break down. Many small incidents lead to all these things. Another answer that I have to reject out of hand is that the pension consultant as an independent operator feels free to do it the way he or she thinks it should be done rather than meet standards. But taken as a given that pension valuation reports have a fairly significant rate of error or deficiency, what about all the other reports that are generated within the life companies, the health companies, etc.? It doesn't seem to be unreasonable to say that they, too, have a deficiency rate if looked at this way. I'm making a leap of faith, but I think it's a reasonable one. Why is this happening? Why is the actuarial profession, whether it's just pension consulting or everything, subject to a deficiency or an error rate? Is it that we're not checking carefully? Is it that we've become too sure of ourselves? Are the pressures too great? Or perhaps you reject it out of hand, but it seems to be happening.

MR. MCCARTHY: This is one of these cases where as actuaries we say "Show me the data." We'd like to understand a little better what happened, but taking that as a given for a moment, I remember that in the early days of the space program—I'm dating myself when I can say in the early days of the space program, and I was an adult at the time—a NASA engineer wrote a paper in which he proved that it was impossible to send a human being to the moon and bring the person back alive. His rationale was essentially to break the process down into its steps. There are 500 steps here, 600 things must be right here, and another 1,500 things must work here. He concluded that even with a minuscule error rate, once it was raised to the 5,000th power or however many steps he had at the end, there was an unacceptably low probability of ever pulling the thing off. That led to discussions in which essentially the concept of an error rate was deemed to be unacceptable, that is to say they could only accept redundancy to the point of presumed perfection, and I guess I would say, notwithstanding some problems the space program has had, its batting average hasn't been too bad.

I don't know that we look at our work the same way, and perhaps one of the reasons that we don't is that for at least some of the kinds of things we do that you mentioned Bob, we hear, "Well, we basically got it about right, and after all it's a reserve, we'll do reserves again next year, and we'll fix it up next year." So I'm surprised by the error rate you quote, and I'd love to know if they were material errors or minor errors or whatever. I think that we do perhaps work tend to mix, on the one hand, situations in which approximation is the accepted order of the day, because that's all you can do—you're doing a projection about something in the future, you're estimating something that hasn't happened yet, it is approximate by its nature—and, on the other hand, you're doing something that's presumably a historical report or the result of a calculation and precision should be possible. I think sometimes we get a little muddy in going back and forth on those things. That's not a full answer to your question, they are some thoughts, and I'd be interested in anybody's thoughts on it.

MR. BERIN: I suspect the peer review process is not fully in place everywhere in every instance, and I think the peer review process does a lot to reduce the error rate, and these were formal valuation reports. So some of Dan's comments wouldn't apply, but the basic thrust is true; you're taking it on faith, but these were formal papers submitted to journals in those two countries.

Ethics is a very interesting thing. It's very much part of our professional lives, and we don't think about it too often. But it's very important if we think of the employee working late at night in the office with his or her light on the desk and nobody else in the office, and the person comes across something that is upsetting, either a missed number or a missed concept. It's from that point, what is done with that piece of information, that very much affects the actuary, the business, and it can also affect the output. If, in fact, the organization doesn't have a tradition of caring that much, there might be a tendency to just push it aside in the rush to get the figures out. I think if we want to leave you with anything, it's the thought that that employee working alone in that situation is very important because it might be you some day and you'll have to face that.

MR. MCCARTHY: In planning my talk I particularly did not want to focus on questions of legal liability because I don't think that's where a discussion of professionalism should start. Lauren Bloom, the Academy's counsel, has an excellent talk that she gives on that subject in the FAC, and it is, particularly to people at that level, a considerable eye-opener. She just describes the changing nature of the litigious environment in which we work, but it is there, it is real. I don't present it to you as the primary reason for being concerned about professionalism or doing a good job, but it's always there in the background, and it is a significant issue with which we deal. Those of us in consulting firms probably face it a little more directly than those with insurers, but, nonetheless, people and organizations get sued all the time today under the best of circumstances, and if your procedures, as Bob is suggesting, get sloppy, or your outlook gets sloppy, or your concepts are sloppy, apart from all the professional issues, you're asking for money trouble.

FROM THE FLOOR: Bob, with respect to some of your remarks, we've had some experience in the Canadian Institute that I think might be relevant. Because we've recognized that on the life side the actuary has total responsibility for choosing assumptions, we thought it was necessary to narrow the range. We've gone through a really tortuous exercise during the last approximately ten years of setting many standards, the idea being, of course, that you're still professional and you have to let people exercise their judgment, but within a range. Standards give them some help in how to approach various problems, how to pick assumptions, but we don't say, "Here's the number." We do have one or two standards where we should say "Here's the number," but that's mostly because of pressure from regulators. We have to do something and fix a certain problem, but by and large it's been, "Here's how to approach each individual problem." One of the things that's happened, though, is that that's all been done within a corporate actuarial environment, and it's been aimed at appointed actuaries for insurance companies, mostly life companies, now for property and casualty (P&C) companies. That's been part of a greater struggle. But we're getting into the area now of asking what about pension practitioners? I think this comes to your question. There's a lot of resistance. We're getting standards in, partly because regulators are coming along and citing the same kinds of numbers that you're citing. Reports are not acceptable and there is too wide of a range, but there's a tremendous resistance by pension practitioners, and the question is, why did it work with corporate people, and why does it not work with consultants? I think it's precisely because corporate people are corporate people and they live in a certain kind of culture that lets them get along in organizations. Most consultants are in a firm with many consultants, everyone looks upon him or herself as being an independent contractor, and "Nobody's going to tell me what to do and what my judgment is." That might be too harsh, but I think that there's an element of that, and I'm not sure how we as a profession manage to say we have to narrow a range and have some standards, and still get across that, yes, you are a professional, and you do have some scope, but it's judgment: it's not just any number I want to pick out of the air because it's convenient. How we get this information or informed judgment to people is not clear, but we're trying.

MR. MCCARTHY: I would observe that every time the actuarial profession has in one form or another walked away from or not fully taken up the challenge of setting appropriate standards, some regulator has done it for us and has typically done it in an environment that is more hostile and leaves less room for judgment than we probably would have had ourselves if we'd done it in the first place. So I accept your comment, but I think the consequences sometimes of not facing up to what society will demand of a profession or the functioning of a profession in society leads us to rules that are more draconian than we might have had ourselves. That's a lesson that we never quite seem to learn.

FROM THE FLOOR: Bob, maybe I can throw some light on the Canadian number that you used. I'm not too sure that we're talking about the same number, mind you, but each year the Canadian regulators have a meeting with the Canadian Institute of Actuaries executive and they report on numbers such as the number of reports to the equivalent of the IRS that are found to be deficient, and the number is, as I recall, about 25%. The great majority of those reports are deficient only in small areas, such as they haven't actually done everything that was needed to be done exactly how it ought to be done, and the majority of the 25% wouldn't be serious cases.