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Summary: A representative from the National Academy on Aging will present the results of a special Academy research project on issues related to the aging of our society. This presentation highlights new areas for actuarial involvement. The Academy's representatives will seek feedback for future directions.

Mr. Richard Joss: We are getting older. I'm looking forward to retirement. There are not just implications in the pension business and for the workers in the plans that we provide actuarial service to retire, but for health care and also social policy implications. I was just thinking in terms of lifeguards at swimming pools. I'm used to those people being young, but maybe the concept of a 65-year-old lifeguard at my local swimming pool is not beyond the realm of possibility.

We have a panel of four experts who are going to talk about the implications of an older society. If I did a full biography on all four of them, that would consume the

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entire session, so I'm going to just give a very brief biographical sketch of each of the four panelists and then turn it over to them.

They are each going to give some remarks, but they are primarily looking for actuarial input. I have met with Robert Friedland before and talked about some of the ideas and why we might want actuarial input in such a project as planning for an older society. Actuaries don't just look at the big picture economic situation, such as in the case of picking an interest rate for a pension plan; they also put a practical spin on it. It's one thing to think that the market may go up, or the market may go down, but it's another to take a very long-term projection as to what might happen in the future. What might the trustees of a pension fund, who are real human beings, do in those situations? Maybe they won't have the foresight to invest as optimally as we might otherwise expect from a pure economic analysis. It's this practical focus that I'm hoping you actuaries will bring to the floor today. We do encourage your participation.

Dr. Robert Friedland is the director of the National Academy on Aging. He is formerly a chief economist for the Maryland Medicaid program. His policy background is primarily in health care and health care for the aging. Judith Feder is a professor of public policy at Georgetown University. Her background is political science, and her current areas of research are in health care financing and long-term-care financing. Ron Solomon is an actuary with the Health Care Financing Administration (HCFA). Obviously HCFA has an interest; it is going to pay for a big chunk of this, if things go the way some of us think they might go. Marilyn Moon is a senior fellow with the Health Policy Center of the Urban Institute. Her background is in economics, and she is currently a trustee of the Social Care and Medicare Trust Funds.

Ms. Marilyn Moon: I will set the stage a little bit for why we're here, and why we want to hear from you in this discussion. Except Ron Solomon, we are being funded by the Commonwealth Fund to look at the issues of trying to improve the educational effort, to have people understand what the implications are, and to think a little more broadly than some people do when they hear some of the kneejerk reactions that make us crazy. People make instant presumptions about a whole range of things that we believe have a considerable range of uncertainty and complication. The real challenge is to try to find ways to express some of that uncertainty and diversity in a way that will help to educate and further the discussion on the future of the public programs, and, in general, obtain reactions of society to an aging population. That's a big challenge because if you ever talk to reporters, you know that they don't want you to give three caveats or four different options. They want to know the answer, the one number, the one piece of information.

One of the things that we're doing in this project is trying to explore ways to expand some of that diversity and to talk about what some of the options are to help foster the debate. We think that there is currently a little bit more attention paid to this issue than there has been in the past. We're beginning to hear it discussed more seriously in debates about Medicare, and over the last year the discussion continues because of the release of the Social Security Advisory Commission report. There's still a lot of heat and not very much light on the issue. As a consequence, that's why we are here. We're trying to push the boundaries a little bit, but one of the things we've found is that it is very difficult to get people to think long term. You can get people to imagine what next year will be like, or what three years will be like, but even forecasters, when you talk to them about 75 years from now, begin to guake in their boots, and it becomes a very difficult process. We don't have much expectation that we can predict 75 years perfectly, but we think we can push the envelope and look forward a little bit. In that sense I think we suspect that actuaries are probably among the few groups who really do think longer term than many Americans do.

These are obviously important and significant issues. The programs that serve older Americans are an enormous and growing part of the federal budget, and that's the area where much of the discussion has occurred. Our focus is not just on the public programs. We do think they're critical and important, but the danger of focusing on them in that way is that we begin to view them as a budget issue, which is how they've been discussed in the last year or so. There is much more of an issue of how, as a society, we're going to adjust to an aging population. For example, if you reduce the size of the Medicare program or the Social Security program by getting more people off the rolls to reduce the number of enrollees, those people don't go away; they still have to be absorbed by society in some way or another. Raising the age of eligibility has the same kinds of issues surrounding it. We, as a society, may decide to do that, but we ought to have a rational debate and not pretend that simply reducing the number of people eligible for the program suddenly solves all the problems of an aging society. That tends to happen a lot in Washington, when people think in terms of the federal budget only.

As I mentioned, this isn't just public policy, and the solution is not just to deal with those particular programs. This is going to affect us all in many and varied ways. For example, think about housing issues. The availability and affordability of adaptable housing will take a lot of pressure off of long-term-care systems and public and private programs. We often don't think of the crossovers. Many of us who are researchers focus on one little area and don't recognize the interrelationships and importance of all of that. Our hope is that this concern about educational efforts doesn't lead to an oversimplification. That's going to be the biggest challenge, in which case this will become a self-fulfilling prospect, leading

to certain policies. If you buy into one and only one view of the world, then there's probably only one solution that will get you there. Therefore, we're trying to raise the possibility of a number of options so that we can have a rational debate on this issue.

Dr. Robert B. Friedland: I'm going to provide some thoughts about a framework for thinking about the subject matter. Our ultimate question is, what do the demographic changes mean for the health and income security of the future elderly and their families? In terms of the way the press and others talk about this subject, there's a lot of what I call fear and loathing, in that you hear things such as: private savings are inadequate relative to longer life expectancy, national savings are too low, pension plans are underfunded, government spending is too high, Medicare is almost bankrupt, Social Security will be bankrupt, the growth in entitlement spending will bust the budget, and the growth in numbers of seniors will strengthen the political voice of that segment (and watch out for that). There is certainly a great lack of confidence in the government's ability to do anything.

This project, on what it means to plan for an older society, was done to develop a framework for thinking about how to define the demographic changes. But is this fear and loathing justified? How does demographic change affect public and private institutions? How confident are we that the future is as dismal as suggested? If you take those straight lines and project them forward 75 years, how confident are we that that's the way they're going to move? Do we have control over key factors? There are other factors that may change what we don't have any control over. How much do they need to change to alter this projection of the future?

In this project that the Academy is undertaking with the support of the Common-wealth Fund, we're looking back to look forward. How well did we predict where we would be today? What factors mitigated or altered the way things turned out? What is different about the projections of the future today from that of the past? How accurate were those past projections, and by how much would key variables need to change to affect the outcome?

Let me identify some of the critical factors that we need to talk about. Demographic change does affect the labor market. Technological change affects the labor market. Technological change affects how we produce what we produce, and it also affects how we define health and long-term care. Changes in the labor market and demographic change also influence our expectations about participating in the labor market, what we consume, and what we save. Those changes in expectations, in turn, may affect our willingness to participate in the labor market. Some of the critical factors that I'd like you to react to are how demographic changes affect the labor market, how the labor market itself may affect productivity, how demographic

change and technology affect productivity, and how productivity affects the aging of our society.

One of the things we've been doing is looking back at past projections of the future, because when we talk about the future of the aging, and when we talk about the elderly population, we know that it has doubled. From 1960 to today that segment has doubled. Beneficiary-to-worker ratios have already fallen. The cost of health care, as well as the cost of Social Security, has risen. The economy has also prospered. What is different about the future from this point forward than the future was from 1960 or 1970? If you stood here in 1960, 1930, 1940, or 1950, you could say very much the same sort of things that we are saying today about the future, yet our economy has grown. Is there is something that's different about this point in time than previous points in time?

If you go back to 1981 projections of Social Security beneficiaries per 100 covered workers, you can look at all the factors that are needed to figure out how many beneficiaries there would be to covered workers. I think the actuaries of the time did a great job of projecting where it would be. They projected where it would be in 1995, but it turned out to be different. Their assumptions about fertility rates and mortality rates were off.

The labor market has gone through very fundamental changes in the last 20 years. How much of these changes could have been anticipated by just looking at demographic change, and how many other things went into making these changes? Women entered the labor market and stayed. Older workers were leaving the labor force at younger and younger ages. Some of this growth in entry-level workers could have been anticipated by the demographic changes. Some of it was attitudinal changes and responses that families had to changing income, which led to both parents or working couples entering and staying in the labor force. We had tremendous variation in the 1970s of new workers entering the labor force, which had an impact on expectations about how to organize your production. It had an impact on whether or not companies would invest more in labor, labor-saving technologies, or capital. Their entry-level workers came in with such a force that perhaps they didn't anticipate lowering entry-level wages, making entry-level workers relatively cheaper than they were in the past, and therefore maybe postponing decisions about investing capital in labor-saving technologies.

The slowdown in the growth of entry-level workers subsequent to that had another set of impacts. Some of these workers who entered the labor force are still there. Many of them are the baby boomers who were a part of the middle management level shakeouts that have occurred in the last few years, as corporations have found that those relatively cheap entry-level workers are no longer as cheap, and have

because of their experience and advancement. Now every corporation in America has gone through a period of reinventing and redefining how they organize their production and their management structure.

How much of this could have been anticipated? How do you anticipate it? How do you incorporate that in defining the implications of a demographic change? The labor force participation rate of women went up, and the most startling aspect is that it went up among married women with children under the age of six. Could that have been anticipated? How do you incorporate that, and what did that do? Of course, it meant new concerns and pressures on employee benefit plans to deal with child care.

We've had a dramatic increase in the propensity of older men, aged 55–64, leaving the labor force. The rate has slowed down, and perhaps, based on a few points, is reversing. Are attitudes and expectations about participation in the labor force changing? Certainly the cause can be attributed to Social Security, early retirement, and early options in pension plans, but is this reversing? For women, the pattern didn't hold the same, but is it leveling off? We see a dramatic decline through age 85 of men and women over the age of 65 participating in the labor force. Then it starts to rise. Do we have a new trend? Is the willingness of workers to be in the labor force changing? How are employers going to respond to that? How are employers responding to that now, and how will they respond in the future? The notion of the importance of productivity and how it affects economic growth is critical.

During this time, we've had a lot of hand-wringing about health care costs and long-term-care costs. The definitions and standards of health care all throughout this time have changed dramatically and regularly. Most long-term care is provided by families, but demographic changes have occurred, leading to smaller household sizes, fewer children, and children being born later. How will that affect the provision for long-term care?

Economic change and change in the labor force can affect the economy, and changes in the economy can alter attitudes and expectations, which in turn can affect labor force participation. It affects our willingness and desire to seek education, which keeps us out of the labor force, but it provides us skills. I think these things affect our familial relations and our use and utilization of health care and long-term care.

From 1970 to 1994, there have been important changes in family composition. Marriages are occurring at later ages. Family size is smaller. There are higher

divorce rates and more single-parent families. We've talked about working women and earlier retirements.

We are struggling with how to get your input on how to frame these issues, how to put it together, and how to define the implications of the elderly population doubling and the population growing. It's going to have implications for all aspects of society. How do we define what those implications are, and how do we put it together? I have tried to lay out some of the relationships that are always changing. Actuaries are building models and trying to predict the future, and we're wondering how to do this because there are so many parts that are interchangeable.

Despite past growth in the population, past growth in the elderly proportion of our society, and past growth in government expenditures and the size of government, advances have been made in science and in technology and standards of living are higher. What is different this time? How will changes in market demand alter the demand for labor? Will older workers choose to stay? Will employers hire them? How will the growth in defined contribution plans affect the financial decisions of the future elderly, and subsequently, the capital markets? How will productivity change?

I already asked the question, what is different now about projecting the future from going back to 1960 and projecting to today? I want to at least throw out some partial answers. You can tell me how off base I am. We are certainly talking about substantially longer periods out of the labor force, both to be in school, and then subsequently after leaving the labor force.

The notion of a four-generation family is going to become increasingly more common. The relationships among family, because of marriage and remarriage, is going to become much more complex. The U.S. economy has less domination over the rest of the world in the global economy.

I have thrown a lot at you, but I have done so to give you a flavor of the kinds of issues we're grappling with and to get the discussion started.

Mr. Ronald L. Solomon: I think what Robert and Marilyn have outlined here is a incredibly interesting project and a way of looking at some of these things that's somewhat different from the way actuaries traditionally look at some of these important factors. Of course, these are factors that we do look at regularly. The question is, how, perhaps, can we relate this to the kinds of things we normally think about? What kinds of answers or at least ideas can we throw into the pot? . As I thought about what they're doing, I tried to relate it to standard actuarial thinking, if there is such a thing. I thought about some of the relationships between

what Robert's been talking about and what we think about. He mentioned a lot of economic projections, which we all know are very critical. Robert Reich, the keynote speaker, mentioned that if the economic assumptions were closer to the optimistic assumptions in the trustees' report for Social Security, Social Security wouldn't have an imbalance problem. Do we think he is more realistic, or do we think he's too optimistic?

When we talk about mortality projections, I know most of my colleagues, as pension actuaries, look at the standard tables that are published. We rely on other actuaries to develop those tables, and we look at what they did and how they did it. We look at the experience of our own groups that we're working on, giving proper credence to the size of the group. We make some judgement about what mortality table to use when we're doing, say, a pension valuation. The question of how accurate these mortality projections are going to be in the future is a topic that is open to a lot of disagreement at this point in time. After this meeting, there will be a big seminar on mortality projections. The actuaries at HCFA, along with some of the economists, have done some analysis recently. Their conclusion is that the projections of mortality improvement that are used in the trustees' report may not be pessimistic enough in the context in which the trust funds look at it. By pessimistic I mean that mortality is improving because the more mortality improves, the worse it is for the payouts of the trust fund. We have one of the leading researchers in that field at this meeting who has his own ideas about how mortality is going to improve in the future.

One of the things that our research has pointed out is the relationship between education and economic advances and the improvement in longevity. If you think of the trustees' assumptions as a package, and they're presented as packages of optimistic, pessimistic, and intermediate, the fact is that the optimistic assumptions have optimistic assumptions about economic growth. They also have optimistic assumptions from the trust funds' perspective that mortality improvements won't be that great, whereas there may be a much closer relationship that would go the other way. For example, if the economic assumptions turn out to be as optimistic as the projections are, will the mortality improvement be far more dramatic?

Another area that some of my actuarial colleagues at HCFA have been looking at is the actual data we have on health consumption. How are we actually spending money? Robert pointed out that the definitions of health care are changing. Most of the data that's collected is assembled by where we spend the money, not what we spend the money on. We know how much money is spent in hospitals and how much money gets paid to physicians. We know how much money is paid for home health care and so on. We don't have data that really show how that money is spent in connection with particular kinds of diseases, such as with multiple

billings. If somebody goes into the hospital for a heart problem, there are billings for the hospital and there are also billings for the physicians, drugs, and so on. Some of our economists have been working on a project to redefine how the data are put into the national health accounts. What will the implications of that be for economy-wide analysis?

Robert talked a lot about the changing labor market. Of course, we know that the huge impact was the entrance of the baby boom generation into the labor market from roughly the late 1960s to the mid 1980s. What we know by looking at the past is that there were tremendous impacts on the educational system as the baby boomers first went into the school system, and then there was another tremendous change as they went into the labor market. We can certainly anticipate that there will be tremendous changes as they move into retirement in the next century.

There's a lot of talk that our savings rates are too low, and if we could increase savings, that would, in fact, change everything around for us. There are several factors that we maybe don't think about in the context of actuarial work. The collection of data on savings seems to focus on three areas: personal savings, business savings, and government savings. Personal savings includes not just what we, as individuals, put away in savings, but what is being put away for us in a pension plan. Defined benefit plans funding has really decreased quite a bit over the last 10 or 12 years because of two external events. One was Financial Accounting Standard (FAS) No. 87, which required that for financial reporting purposes, people start using the projected unit credit method. It's not as well known that, before that time, the most common actuarial cost method was the entry-age normal method. Since that time, the most common method for valuing pension plans for funding purposes is the projected unit credit method. As actuaries, we all know that means lower accruals in the early years, and greater accruals in the later years. Of course, over 1987, the tax changes that put the new current liability limits on maximum deductible contributions has also had a serious impact on the amount of contributions going into the DB plans. In actuality, the payouts from defined-benefit plans are two to three times greater than what's actually going in as contributions. That's not to say that the assets of DB plans are decreasing. They're still increasing because of investment earnings. That's going to turn around, perhaps in the first decade of the next century. It may well be that the payouts from DB plans will exceed the combined income of both investment earnings and contributions that are going in. The trustees' report document very clearly says that is coming for Social Security as well. It says that in 2013 the benefit payments will exceed the tax contributions coming in, although the trust funds will continue to grow for awhile because of investment earnings. Around 2019 that will reverse, and the trust funds will start to be depleted. If we think of this in the context of a broader economy, we have to start asking questions such as,

where are the sources of capital coming from that will replenish these markets? Where are the investments in equities that private pension funds hold now? Where are the investments in treasury bonds that are held by the Social Security trust fund? These are the areas where we, as actuaries, can perhaps think about those relationships and provide some input to Robert and Marilyn.

There is just one other thing I want to close with. I was born in 1944, so I'm two years ahead of the traditional start of the baby boom. I'm also a baseball fan. I was born in St. Louis, and I was a fan of the St. Louis Browns, who have long since moved to Baltimore and become the Baltimore Orioles. One of the pitchers that they had at that time was an aging pitcher from the old Negro league named Satchel Paige. He had a motto, which was, "Don't look back. Something might be gaining on you." I didn't pay enough heed to that, but as I look back at the generation behind me, I see the baby boom generation gaining on me like a tidal wave. I think I should have paid more attention to Satchel Paige.

Ms. Judith Feder: I think that all of our speakers have raised a lot of questions, and we are happy for you to raise more. We are not so much looking for answers, as both Robert and Marilyn said, as we are looking for ways to educate the public and policymakers about how to think about uncertainties and not grab for quick fixes. Keep that in mind, and please, let's open the discussion with comments on any of the broad array of issues that have been raised, or some we have forgotten to raise.

Mr. Daniel M. Arnold: Let me suggest that you look at the relationship between attitude and mortality. There has been some evidence from the Korean War of the American prisoners of war having give-up-itis. There's a famous speech given by a psychiatrist analyzing give-up-itis. Some of the American prisoners of war basically gave up; they went off in a corner, curled up in a ball, and died. This can be applied to how the attitudes of workers can affect their mortality. United Technologies did a study of their retired workers about 20 years ago. They found that an incredible percentage of them were dead 18 months after they retired. They started preretirement counseling programs and got people involved in all sorts of activities. This was true of men, in particular, who had other interests when they retired (meaning they didn't just sit home in front of the TV set and wait to die). It seems to me that there may be some relationship between a person's attitude after retirement and mortality.

If baby boomers are heavily into defined-contribution plans, and if there is a financial turnaround, that could have an effect on mortality. People would say, "I don't have the income anymore, I can't maintain the standard of living," and that would affect their willingness to live. I think we also see, among the elderly, that when people at advanced ages start getting into a depression they kind of give up.

They get an illness that would normally not be fatal, but it becomes fatal because they don't have the will to keep going. I wonder if there isn't a relationship that might be useful to study when doing projections into the future.

Ms. Moon: That's an interesting thought. It's often said about the baby boomers that they have very unrealistic notions about life expectancy, and they expect to live forever. That may actually be more pessimistic from the actuary's standpoint.

Ms. Feder: As a person who deals with policy, I am terrified about the policy prescriptions that emerge from some of our thoughts about the future.

Mr. Paul H. Jackson: I retired eight years ago at the mandatory retirement age of 65. At my age, I was interested in learning about the problems of aging. You have entirely missed the problems that I see, which consist of fading eyesight, increasing number of aches in the spinal column, hip replacements, and so on. I think there is a problem here that you're also avoiding. I was born in 1923 and lost both my parents in the early 1930s. In the 1930s, in the middle of the Depression, we were not only poor, but we were hungry. Fortunately, I got drafted into the army in World War II, so I could go to the University of Chicago on the G.I. Bill. I was lucky to get married to a wonderful woman, who helped me all the way through, and we saved our money. The reason we saved our money was we knew what it was to go hungry. My children don't know that.

I had a son who collected pennies, and he used to throw them in the wastebasket because they weren't worth anything. I told him, why don't you at least put them in a jar, and when you have a few thousand of them, take them in. His response was, "Oh, that's a lot of trouble." My son's generation is not interested in saving. They aren't saving, they're spending. I really couldn't save much until I hit the age of 50, because we had a child with tremendous medical expenses. At this point, as an elderly person, I can say that my federal income taxes are five times the total Social Security and Medicare benefits that we receive in a typical year. When I see the burden of the elderly, I know there are a lot of people my age who, because they have saved, are not a burden on anybody.

Finally, I got a copy of a letter from Bob Myers, and I'd like to read one sentence. I had criticized Bob for opposing changes in Social Security, and he's sending this on to the editor of the *Pension Section News*. Bob says, "As to whether OASDI really has long-range financing problems, I believe that this is very likely, but not an absolute certainty." I would simply say, as to whether OASDI really does not have a long-range financing problem, it is also not an absolute certainty. If we wait until we get an absolute certainty to do something about Social Security, it's going to be too late.

Ms. Moon: There's a lot of food for thought there. I don't think that by uncertainty we mean to suggest that we're proposing that you wait to make changes until there is certainty. When I hear people say, "Because the population over 65 will double, you must therefore do the following things," I don't think some of the suggestions make sense. People take certain changes as inevitable, and they use that as a justification for certain other kinds of changes. I think there is considerable certainty that the program needs to be changed, and that there will be financing problems over time. I think that there are a lot of things that we don't project very well over time, and that we don't know exactly how to project. I think the question about generational differences is an important one that comes back to the attitude issue. It is very important, and it needs to be taken into account. One of the great difficulties is what does happen to a generation that has saved less? Will we hold people accountable, at age 65, for choices they made all through their lives? That's a very tough public policy issue.

Mr. Friedland: On top of that, when the generations behind see what's happening, they're going to respond in a certain way. How do we anticipate that or how can we, at least, become cognizant of the fact that a generation looking ahead is going to respond to what they see? That, in itself, is going to make changes.

Ms. Moon: The other thing I would mention is there is some good news about morbidity. I think there is now increasing evidence that we are finding ways to deal with some of the problems of aging that are quality-of-life problems and not just mortality problems. I think that is good news in terms of the quality of life. It's expensive to do a lot of those things.

Mr. Wilfred Thornthwaite: There's a book called *Dare to Be 100: 99 Steps to a Long, Healthy Life* by Walter Bortz. (Fireside, S&S Trade, 1996). The challenge of the book is that everyone should make living to be 100 their goal in life. One of the premises or challenges in the book that I found very interesting was that we have to move away from sort of the cyclical view of life. We spend our early years educating ourselves, and then we spend the middle years working, and then we retire. DARE is an acronym for Diet, Attitude, Recreation, and Education. The author's premise is that life is in layers and that we have a continual education process and a continual recreation process. We should work all our lives and not retire. I think the first speaker touched on the attitudinal aspects of aging. There have been some articles in the Nashville paper about people who are in their late 50s going back to medical school so they can work in rural areas. I was just wondering how much of this enters into your research?

Mr. Friedland: I think this is the heart of the problem of how to define what we mean by things like retirement. It's an evolving process that is continually

changing. The challenge about the future is different. Are we on the verge of creating a new phase in our life, for which we are struggling to find meaning? What kind of repercussions will that have on our children and grandchildren and the economy itself as we struggle to find meaning in that period of time in which we've left the labor force or in the years after leaving the labor force? If we do not leave the job force, will we define retirement or this period of time differently?

The question for me is, how much do we really educate ourselves in our lifetime and could that increase? How will that have an effect? Right now, we certainly have a perception that older workers, those over 40 or 50, are not productive but I don't know if we've really measured that very well. Do we know that, and what do we mean by productive in that sense?

Mr. Thornthwaite: I think part of that is, do we stay in the same career? The author of *Dare to Be 100* also makes the point that one of the things that promotes more of a full life is that people will make complete career changes. I think many actuaries are being faced with that.

Ms. Feder: Do you mean it's not always voluntary?

Mr. Thornthwaite: Yes, but that may be a good thing.

Ms. Moon: One of the other issues is, how flexible are employers going to be? I think there have been a number of people who have speculated that, as the size of the labor force decreases, that's going to put some pressure on employers to become more flexible and offer part-time employment much more than they do now, and let people take summers off and do things like that. People who are older may decide these things are more important to them than working full time. I think it is unknown whether we can find ways to do that. Several institutions in our society make it harder to get health insurance. If these people are not working, how do you offer health insurance? What do you do about pensions and those kinds of benefits that often make the labor force inflexible? These will be critical issues.

Mr. Thornthwaite: I think the information society and genetic engineering will take care of those things because they won't be in an annual labor environment. As long as you have mental capacities, genetic engineering will take care of some of the health concerns.

Mr. Friedland: So far the technological advances have been used to get rid of workers.

From the Floor: Bob you mentioned education. Do you define that as institutional education? What about the things that people learn throughout their lives on their own? I would contend that a 60-year-old is more educated than a 30-year-old.

Ms. Feder: Because of experience.

Mr. Friedland: Right, because of experience, but the labor market hasn't yet recognized it that way, at least not completely. I finished a draft of a paper this week and it was startling to me. I was looking at functional literacy in the U.S. I looked at how many people seem to lose their ability to use maps and to read, understand, fill out forms, and do simple computations. I assume that people are learning as they go through their career, but perhaps, at a certain age, they stop using those parts of the brain. Perhaps it atrophies or dissipates, or we start losing those abilities. When you look at the entire adult population, you find that about one-third are functionally illiterate. They can read, but they're functionally illiterate in terms of comprehension. That percentage can reach 50% if you consider those who are marginally literate. These people can do the tip on the dinner bill, but they can't do much more computation than that. I was startled by that. I wonder how, in the actuarial sciences, we compensate for that happening or not happening?

Ms. Feder: Is that something that can be influenced by behavioral or policy changes?

Mr. Friedland: Yes, behavioral learning or policy changes.

From the Floor: I would like to make a couple of points. First, I'd hope that in trying to formulate policies that deal with these issues that plenty of room would be left for market solutions. I hope it wouldn't be viewed as something susceptible to only government command-down handling. That ends up doing more harm than good. Second, on the issue of this generation saving less than the previous generation, there's going to be a fairly substantial wealth transfer from the frugal generation to the spendthrift generation. That may be one of the reasons that the spendthrift generation has seen little need to be like the frugal generation. They say, "Why do we need to save? Our grandparents did it, and they're not going to spend it all before they die. We will inherit it from them."

From the Floor: As I have explained to my children, that's why we have generational-skipping trusts. I'd like to suggest a different way of thinking about the problems of the future. Maybe we can call it looking out the future back window. The baby boomers are such a huge bubble in the population that we're often focusing on what they will need as they age. There's business opportunity to anticipate the needs and provide them. By looking out their back window, can we

determine what they will no longer need as they age? Is there something that they won't be able to sell to the people behind them because they will have more of it than those people need? Their used car market is not as good as mine.

Mr. Solomon: Not to mention houses, which are a far more important part of most people's assets than their cars.

Ms. Anna M. Rappaport: I'd like to suggest a little bit different way of thinking of some issues and speculate about the possibility of others. I've been very concerned about the frail elderly. I've also been concerned that when we say long-term care, we are describing a subset of the frail elderly. There's really a continuum, and we don't think about the issues appropriately because of that. I'd like to suggest that one of the things that we need to do now is think about different ways of classifying the frail elderly. We should divide them into subgroups that might define the kind of services and care they need, and we might figure out how the transitions might occur between these subgroups and where to find data about the subgroups. I think this would be very productive, both in terms of trying to help us improve the way we deliver services and certainly by building financing systems. There already is some innovative work done by an actuary, Bruce Jones, whose paper, "Stochastic Models for Continuing Care Retirement Communities," is in the January 1997 issue of the North American Actuarial Journal. He looked at different ways of classifying people in transitions. I view that as a really important step toward rethinking the issues. I think subgroups is a big issue.

Ms. Feder: Since you are raising the issue of subgroups, can you talk a little bit more about what you'd use to classify? Are you talking about the functional limitations?

Ms. Rappaport: I think functional limitations might be right, but I also think mental things might be right. There are some data in a paper from the British Institute of Actuaries that just gives four categories in terms of how much help people need. I don't think that really works for this, but it points us at the continuum. I think the activities of daily limitation and functional limitations are one way of thinking about it, particularly if you add in the so-called instrumental activities of daily living such as needing help with shopping and doing other activities. There might be other things as well. If you think about somebody not being able to balance their checkbook anymore, that might be disease-related. It might also be related to mental function. It does prove that they need help handling their finances where they didn't before. There are people who need help driving. You might want to think about what are all the things that people do in the course of a week or a year of their life. Then try to determine which are the ones that they might need help with and group them into categories. You'd probably need people who have

knowledge about medical things that go together, but you'd need other kinds of people as well. I don't know how to define the subgroups. I'm very excited about this because I think it will be a big step toward being able to think about these issues in a different way. I think we can then try to think about which of these things really should be financed by people's savings and which ones might be insurable or subject to benefit plans or available through community agencies.

Let's take that same idea in a little different direction. I've been talking about this issue of definition of retirement for years. Maybe what we need to be doing is thinking about some different categories in addition to being in the labor force or retired. There are more categories of activity and how you move between them. Somebody was talking before about private sector solutions. I think if we started counting and defining things in different ways that would help open up people's ideas to possibilities that there are different patterns, and that might encourage marketplace and private sector solutions, as well as individuals to find them. I'm concerned about help for the frail elderly, but the same idea might apply to activities.

My next two comments, in a way, also relate to dividing things up. I think it's very important, whenever you're looking at any issues relating to the elderly, that we look particularly at demographic subgroups, and probably cohorts as well because the living arrangements and life spans of males and females are so dramatically different. The issues that confront the male and female elderly populations overall are dramatically different. I get very upset when I see things that are presented without some data, because then we get into averages that don't work very well. I haven't thought as much about the cohorts. I had an interesting discussion with somebody from a bank that's involved in bancassurance. This person said that one of the things that actuaries are really good at is thinking about cohort things, and that's very important.

The other point I had is I think it's very important to think about discontinuities. A discontinuity is the loss of a spouse or a significant change in physical functioning. Discontinuities are events in people's lives that cause something to be needed, and that's a little different from focusing on catastrophe, per se, but it is a very comfortable area for actuaries. I'd like to encourage all those things.

I'd like to give an endorsement of Robert's publication. I just love the *Public Policy* and *Aging Report*. The last issue of it has a great article by Joe Quinn on retirement trends and patterns in the 1990s. It shows some data on early retirement. I think anybody who's interested in these issues would like this publication. You can subscribe to it through Robert. I'd say this is a great thing for expanding our

horizons. There is also another very interesting article in a recent issue on how housing and health care for the elderly has come together.

From the Floor: There's a lot of food for thought there. Some of the life transition issues are really important, and we don't know enough about them. There has been a little bit of research that suggests the death of a spouse is often preceded by a major illness in which assets get depleted and pension status changes.

From the Floor: Lately, I see many elderly people living alone in big houses. I read stories about latchkey children. Then I read about the national infrastructure. I think these things are all very connected. You discussed the familial relationships. Parents have children going into the workforce and families are sort of scattering. There is a loss of connection with the elderly. I know you're saying that much of the care is still home care, but my perception is that's declining, and it becomes more difficult for families to maintain that care when both members are working. Are you looking at these kinds of issues? I don't think the allocation of resources has to be adversarial. We don't have to decide whether funds should go to the elderly or go to education or to the roads or to public transportation. These things are very connected. For example, if you can't drive 50 miles to the grocery store, should you really be living 50 miles away from the grocery store?

Ms. Moon: I think this illustrates some of the real constraints that are out there. I think housing is a real key, but there are constraints. Most of us live in neighborhoods where the housing stock is very similar, so if you live in too big a house but you love your neighborhood and you identify with that location, it's going to be very difficult to move because there's not going to be an apartment building next door. We put these kinds of constraints in place that end up haunting us. I think transportation and housing are real key to understanding people's ability to function well over time. I don't think we give enough attention to that.

Ms. Feder: There is the issue of how long-term-care services are provided. I think that the issue is raised as a very real problem. What happens when daughters and daughters-in-law are in the workforce and not available to give the home care? I think that's something that is raised as a major concern about the future. I think it also raises the issue that Marilyn alluded to at the beginning of our discussion, which is that in public policy discussions about budgetary issues like Medicare, suggestions are made to simply reduce the benefits and have people pay more or manage on their own. If care is to be provided, it places a greater responsibility on the part of the younger generation for their parents. It is really all connected and has to be thought of as such.

Mr. Friedland: This is the heart of our problem. How do we convey, in a simple way, the point that you eloquently made, which is that there are connections? How do we convey that the future may not be what the projections suggest because these connections will have implications?

Ms. Feder: Before we take another question, I was thinking about that as a way to raise questions about why the dot is wrong, and how future dots may be wrong. If you have some thoughts on that, we'd be really interested in comments.

Mr. Solomon: I'm sure that many of us have faced the situation of aging parents or in-laws. There came a time when it really was no longer appropriate for my in-laws to drive. People in this country have become so wrapped up in equating the automobile with their personal freedom. It is so difficult for these elderly people to face the reality that maybe they've passed the point where they have that freedom anymore.

Ms. Feder: Again, it relates to their living arrangements, and what happens to their lives if they can't drive anymore.

Mr. Richard E. Burke: Over the past few days, I've heard a lot about the Social Security imbalance problem and the baby boomers. The one thing I haven't heard, and I think I've been paying attention, is any reference to immigration and how sensitive the problem might be to immigration rates. Is part of the long-range projection to change those rates because of limits on immigration?

Mr. Solomon: There certainly are assumptions about immigration that are used by the Social Security and Medicare actuaries in the trustees' reports. As you say, it is an area, like all the other assumption areas, where there are differing opinions as to how things will change in the future. In this particular case, we might think that external forces may have more impact on the assumption that we might be able to predict about immigration.

Ms. Moon: In the last couple of years, there has been discussion on Capitol Hill about stricter immigration rules for older immigrants coming to the U.S. If we want to be more flexible about allowing people in, we could certainly devise an immigration policy to make the situation better. I'm not sure that it's going to have the ring of palatability. We can't let in only young, well-educated, healthy people. You don't want to let them have their parents come after them. That may be a little too tough, in terms of immigration policy. To a certain extent, the U.S. can pick and choose immigrants, and we certainly could, as a public policy, decide to try to improve some of the future projections through immigration policy, but that's

clearly an explicit policy decision, in addition to the illegal immigration that comes into the U.S.

Ms. Feder: Even though what you said was bordering on the offensive, it actually seems to me that it's exactly what the policy has been. You don't see in the discussions of immigration policy the focus on keeping people out. I think there has been very little attention to the negative implications of that for the productivity and for the workforce. It seems to me that's a part of the education effort that probably needs to take place.

Mr. Friedland: It's certainly one of the variables that one can talk about if you want to change it. It is irrespective of how attitudes and the political process will respond.

Ms. Moon: If you're going to allow a lot of immigration, then I would think you would want to put additional resources into education to make sure the next generation—children of immigrants—get a really good chance to be productive. This probably means concentration of additional resources and education.

Ms. Feder: That's a good example of something that can move with policy, and it can have significant implications.

Mr. Kiran Desai: I have a couple of points on immigration, which I can personally testify to, to some extent. About 30 years ago, I talked with a deputy Social Security officer and told him that one of the ways of changing the imbalance was to permit younger immigrants to come over—that would change the work replacement ratio very quickly. We might want to do that. My point is that it changes the attitude, and that has the nonquantitative aspect we've ignored. Some of the immigrants who have come in large numbers in recent years have brought with them different attitudes than what was prevalent. That applies to family relationships too.

The other thing that was brought up was how the frugal and nonfrugal society would change the housing market. We may want to look at other countries that have had this problem before, and have solved it. For example, in France it is very difficult for a young person to buy a house. A young person can go to an elderly person who has a big house and empty nest and buy the house upfront. He or she gives the cash for the right to buy the house when the person dies—it's almost like a reverse mortgage. He or she can live in the house, and the elderly person has young company at the same time and someone to take care of his or her needs. Some of these solutions are neat. Some solutions, such as those in India, where I come from originally, are rooted in the joint family system. Grandparents are at home and there are no latchkey kids because grandparents are taking care of the

grandchildren. Some of these solutions may come about in a different way because the U.S. is a different country with different cultural norms. Some of these things can be adapted and might solve some of our problems.

Ms. Moon: Think about how quickly attitudes can change. Not very many years ago, young people wouldn't have thought of moving back in with their parents, but we saw when the labor market shrank, that happened a great deal. I think these things can change rapidly sometimes.

Ms. Feder: Marilyn and Robert speak to policymakers all the time. Ron is doing these analyses that feed into the policy process. I would think that you would have more visceral reactions to what has been discussed that you might want to share with us. Any thoughts?

Mr. Keith S. Weaver: I'd like to pick up on Anna's earlier comments in terms of subgroups. I'm not sure what the statistics are, but I have a sense that there is a real shift towards a breakdown of the typical family structure. Some of the subgroups are, from a social perspective, in terrible shape. It's becoming a significant component of our population. As these people age, I think the issue is going to be phenomenal. I think when we put up trends of labor force participation or singleparent families, we see that coming through. I'm not sure if we fully understand the real implications of what those trends are. If we could model what those impacts could be and try to understand the size of those subgroups and the age of those subgroups, I think there would be tremendous learning in terms of understanding where it goes forward. How does this relate to aging? From an economic and social perspective, there's going to be a different sort of coping mechanism with aging in each of these subgroups. What happens to a single mother, on social welfare, who has had five children by five different fathers, and none of the children can support her? What are the implications of her aging? What's her outlook towards her health and the things that she needs? We're all in different economic classes, and each class has its own different market dynamics. That draws me towards doing an economic model for each one of those subgroups. How do these people cope and react to the different economic demands on their lives? As they age, there is a shift in their need for support. Where does that come from? I think that would be a very rich type of area to investigate.

Ms. Moon: The inequality of income that exists for the population as a whole will be an increasing concern over time, as we talk about aging and potential changes in public policy. Ironically, the inequality within the current elderly population is already large, and much more so than a lot of people have presumed. I think there will be some special challenges. I read a very interesting article not too long ago about people reinventing families. Black women who live in an inner city

essentially got together and created their own family of six or eight black women. They were acquainted through their church activities, and they essentially became their own support network and were operating like families. One of the other questions is whether or not we're going to be flexible as a society. If we can create new arrangements that will allow people to have some of those flexibilities. It could deal with things such as limitations on how many people who are unrelated can live in a housing unit. There are all sorts of policy things that can stand in the way of this creativity.

Mr. Friedland: What are the consequences of the five children, in terms of their productivity and place in the economy, if we don't reinvent the family or there isn't sufficient nurturing, regardless of the economic circumstances? That will have its impact on the resources that are used between now and the time the mother is old.

Ms. Moon: I think one of the really interesting things that may not get studied about welfare reform and the changes in welfare reform, is what happens to kids and their education and achievement in this brave new world we're heading into. If it doesn't go well, I think that would be a very early warning device that tells us that we need to think of another solution.

Ms. Feder: That's right. It will have very long-term implications.

Mr. Solomon: Let me just pick up on one thing Marilyn mentioned. As an actuary, I'm thinking about assumptions that need to be factored into these kinds of models. You talked about the increasing inequality of wealth. A pronounced trend in this country for close to 20 years now has been the growing disparity in wealth between the rich and the poor. To what extent is that a trend that we can predict with any certainty, or even any comfort? Is it going to continue or reverse?

Ms. Rappaport: I think human capital is very much a part of wealth these days. There is also the question of how we measure wealth. One of the concerns that, as actuaries, we face in dealing with various kinds of customers and publics that we serve is whether people are learning retirement planning. I think that some of the problems of the elderly are how we deal with how we use assets over our lives and sometimes make uninformed decisions, which is one of the reasons I'm so interested in the risk. I think our natural tendency is to think about lots of data, large groups of people, averages, and statistics. I certainly wouldn't want to discourage us from doing that.

Something else that can be equally and sometimes even more useful, if done in parallel, is looking for single situations and anecdotal evidence. We should have in-depth study of single cases. We can learn important lessons about what's

possible, and we can also learn new things that might help us classify differently. We can find opportunities. If you think about the whole notion of best practices in business, that's all based on the idea of single cases. We shouldn't ignore single cases. Successful single cases can be put out in the private sector as models that might cause individuals and local voluntary groups, businesses, and other people to want to pick up on things. I'd like to support that as another area of exploration.

Ms. Feder: Yes, sometimes it's easier for people to grasp.

From the Floor: Is the disparity of income in the U.S. widening or narrowing? I think another question worth considering is whether it makes any difference because the population who is classified as poor is an ever-changing group. It isn't that people become poor and stay poor for all of their lives. A big precipitating reason for that is divorce. Women get chucked into the poverty group because of divorce, but they don't stay there. This is the country where people can be upwardly mobile. I just think that's something that needs to be kept in mind when people talk about disparities between the so-called wealthy and the so-called poor. Ms. Moon: The evidence suggests that's true for some groups, but not true for others. If you're a senior citizen, for example, and you're poor, chances are you'll be poor for the rest of your life.

Mr. Patrick Welsh: I think the greatest challenge may be to think the unthinkable. I look at things that have happened in recent years. I wonder if it is perhaps not unthinkable that we will have a booming assisted suicide industry in this country in the future. Will we have a boom in postmenopausal births by women—births that are essentially done without men? What does all this mean? Where are we going?