Informal Discussion Transcript
General Session II: Insights Into Successful Aging

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STEVE VERNON: Okay, we'll get started soon. So welcome to the final session before the reception tonight. Thanks for coming here. My name is Steve Vernon. I'm a research scholar at the Stanford Center of Longevity, and I'll be the moderator today, so thanks for coming. I'm going to have each of the panelists introduce themselves in a second. Really, what we're going to do today is I'll talk for about 30 minutes on the Sightlines Project, and then we'll have some discussion with our panelists, and then we'll open up to questions from the audience here. So that's the plan.

So a brief introduction.

CYNTHIA HUTCHINS: Good afternoon, everyone. I'm Cynthia Hutchins. The only person that calls me Cynthia is my mother, so you can call me Cindy. I am the director of financial gerontology at Bank of America Merrill Lynch. I'm in charge of providing thought leadership mainly on the topic of longevity and aging.

JIM TOOLE: My name is Jim Toole. I'm a managing director at FTI Consulting. I'm a life and health actuary. I've been working on public health issues for the last 10 years or so and its interaction with community and actuarial resources. I'm very glad to be here at my first Living to 100 Symposium.

VEKEVIA JONES: Hello, everyone. I am Vekevia Jones. I work as a financial planner with Financial Finesse. As a matter of fact, our CEO, Liz Davidson, was going to be here today, and she wanted to just let everyone know that she wishes she could. She ended up with the flu, and you know, that feels like death for anyone else. But I work with people from all aspects of life by helping them reach their financial goals, whatever they might be, and I get to do that without worrying about any sales goals or anything at Financial Finesse. So [I'm] very happy to be able to be a part of this today.

STEVE VERNON: Thank you. So I want to start with a question for the audience. How many think we have a retirement crisis in America? Let's see a show of hands. Okay, lots of folks. I think we do have some serious challenges, but I want to put it in respect of, you might have seen graphs like this that show life expectancy. And starting off with the Bronze Age, it's around 18 years from birth, and then over time, it's progressed. But really look at the last two bars there.

We've seen a tremendous increase in life expectancy in the 20th and 21st centuries, and so I really want to put into perspective this crisis that we are facing. It's really the result of what I think is one of humankind's greatest achievements, is this long extension and life expectancy. So I like to think, "I'm 63 years old; if I had been born several centuries earlier, I'd probably be dead by now." So I'm really enthusiastic about rolling up my sleeves and dealing with these challenges that really are the result of a tremendous human accomplishment.

A lot of these gains came from things like reduction in warfare and violent death, sanitation, clean water, regular supply of food, electricity, vaccinations. So a big part of these improvements have come about from public policy, health policy and infrastructure improvements. But then looking just at the 1900s until now, we're still seeing continued improvements in life expectancy both at birth and from age 65, and so these are the medical technologies that have been introduced and continue to be introduced and will continue to be introduced in the next 10, 15, 20 years. We've seen presentations earlier about particular drug interventions that can extend life. We'll probably hear more throughout this presentation.

So we think that the life expectancy gains will continues to take place. However, in today's world, these gains aren't justified or aren't delivered evenly across society. And so here's a chart: If you look at the bars on the left, these are for men; on the right is for women; and each bar represents an income level, and we can see what have the life expectancy gains been over the last 50 years or so. And what we're seeing is flat for men and even declining life expectancies for women at the bottom part of the income spectrum, whereas these gains are really accruing mainly over the top half of the income and wealth profile. And so we're worried that these gains in life expectancies really aren't evenly distributed, and these disparities by some measures are growing.

So the Sightlines Project was at the Stanford University, Stanford Center of Longevity, and really, our vision was to stimulate a national conversation on what are proactive approaches for improving living long and living well in the 21st century. And really, one of the premises is that never before have individuals or a population needed to really plan for their very distant futures, and there's really nothing in our evolutionary heritage that sets us up for this. If you just lived to be 18 or 20 or even 25 or 30, your focus was on surviving until tomorrow, and you didn't really need to think about long term. And so thinking 20, 30 or 40 years out doesn't come to us naturally, either as individuals, as communities or as societies. So what we want to do is look at what are the actions that we can take collectively that might improve our health and well-being.

We really don't have answers to this. The first step, we believe, is measurement and looking at how Americans are progressing in these various activities, and I'll go into detail about what I'm talking about.

So the opportunity is that we know from that slide that I showed you earlier that it is possible to live to advanced ages, and we know it's not really random, so what are the factors that influence people living longer? The process we went through at Stanford is we gathered a group of experts, we convened for two days, we talked about the different action steps that people can take that might improve their health and well-being. We debated the evidence. We came up with a starting list of 100 indicators, and really, what we want to do is focus on action steps that were malleable, and what we mean by that is action steps that people in theory can change. We acknowledge that some changes are easier said than done, but certain things like you're not going to be able to change your date of birth, you know—that's not changeable. Where you were born you can't change. And so those actually do have an influence on your health and longevity, but there's not much we can do about that.

And so what we wanted to do was measure the action steps that could enhance longevity in the population, and these, as you'll see, they don't need new medical technology. They don't need new drug interventions. And so what we think is that these behavioral and societal interventions can dramatically improve longevity across the society, and they complement the other technology advances that we're seeing, and we think both are important—the technological advances and these behavioral and societal challenges that we're talking about.

So what we focused on were indicators in three domains: financial security, healthy living and social engagement. And what we want to do is measure the percent of Americans that are, quote/unquote, "doing it right"—right as defined by the research—and really, what we want to do is just measure progress: what percent of Americas are doing the things that research indicates might contribute to your health and longevity. And I say “might”; nothing is certain in life, but we can see, at least across populations, if you improve the odds for individuals, then across the population, you’ll have more people living long and living well.

We’re not building a predictive model at this point. All we’re doing is just measuring progress or backsliding, and so what we really are looking at is age group by age group, what percent of the population are taking these action steps, and we’re measuring, for example, how are 25- to 34-year-olds today doing against 25- to 34-year-olds 10 or 15 or 20 years ago. And so when you see the black bar there, you probably can’t see the numbers, but each one of those numbers in there are six age groups, starting from age 25 to 34, 35 to 44, 45 to 54, 55 to 64, 65 to 74, and then 75 and up. And so what we’re doing is we’ll be identifying action steps that research has identified as contributing to health and longevity and what percent of the population is taking those action steps in each of those areas.

We also want to use nationally recognized databases that have been around for 10 or 15 years, and so that started to narrow the possible indicators we could look at. So we acknowledge this might not be the complete list of indicators for health and longevity, but what we thought was these are indicators that we can use to measure progress across society going back 15 to 20 years ago.

So just a summary of these indices: This is a graph that’s showing healthy living, financial security and social engagement, and what we’ve done here is just showing have we seen progress in the last 15 or 20 years, or have we seen backsliding in aggregate, and I’ll be digging down in the details in the next few slides. But just the headlines here are that healthy-living gains in society—we’ve seen gains in the American society, but they’ve been offset by losses, and so overall, we haven’t seen a lot of movement. Whereas financial security in the last 15 to 20 years—we’ve seen alarming trends that we hope that we can shed light on and maybe have solutions that might have turned us around. Traditional social engagement has been waning, and we’re very careful to use the word “traditional” social engagement here, because there were new ways of engaging socially. They weren’t around 15 to 20 years ago when these databases were constructed, and so that’s an open question.

So I want to start digging down on each of the domains here, and by the way, I want to make a deal with the audience here. I’m going to speak to the headlines. There’s a lot of data here. What I want to do is get through the headlines of the data; it gives our panel a chance to talk, and then in the Q&A session or later, we can dig down deeper, so I’m not going to just dig way down into the data here. But what I want to do here on this graph here is just explain what you’re looking at is that this is healthy-living indicators, and this is the percent of the populations in aggregate that are doing it, quote/unquote, “right.” The green circle represents as close to today as possible; in this case, it was 2011. The open circle represents 1999, and so this is just movement between those two places in these indicators in aggregate.

The metrics that we looked at—we had healthy daily activities. Did you have frequent exercise—150 minutes of exercise per week? Five servings of fruits and vegetables per day? Healthy body mass index, under 30? And are you getting sufficient sleep—at least seven hours a day? These are basic health activities that the research is showing if you get in there, if you’re doing these things, you’ve got a good base for healthy living. It doesn’t say it’s a complete action plan, but maybe turning things around, if you don’t do any of these, then you’re increasing the risk to your health.

And then the other category is avoiding risky behaviors: not smoking, avoiding illegal drugs, not binging on alcohol. And the latest one, which is getting a lot of attention, is sedentary behavior. Basically, what we’re saying is that sitting for eight hours a day or more is not good for your health.

So digging down into some of the indicators here, we’re seeing that some of the good news—smoking rates continue to decline, so that’s good news. Exercise is more common, but also, so, too, is sitting. And so what we’re seeing now is that, for example, in the 25-to-34 groups, more than one in two Americans are now meeting exercise recommendations, but counteracting that is a majority in every age group is now spending many hours a day sitting, and so that’s one thing we think we might need to focus on. And the preliminary evidence is actually indicating that sitting too much can actually counteract exercising, or turning that the other way around, if you sit at your job all day long and then go work out at the gym, well, maybe you haven't undone totally sitting all day long. And so what we want to do is raise awareness about the possible risks with just sedentary behavior. We all have heard that obesity rates continue to increase. That's some of the bad news that's offsetting the good news on exercise.

Here's an interesting one that wasn't in our official indicator list, and by the way, we did look at other trends that didn't make it to our official indicator list but nevertheless we want to comment on. And so the debate on polypharmacy—really, polypharmacy is taking five or more prescription drugs permanently basically, and we're looking at it for people who are age 75 and over, and that has really skyrocketed. And this is one of these good-news—maybe, we don't know if this is good news—things. I mean, clearly, for a lot of people, these prescription drugs that are managing cholesterol and blood pressure and so forth—they could be keeping you alive; that's the good thing. What we don't know, with all of these prescription drugs or many of them, is what are the long-term implications of taking that for 15 or 20 years; we don't know what those risks are. In addition, now we're seeing the cost of these drugs is the cost to society, it's a cost to individuals. We see drug copays going up, and so we just want to point out—we're not saying that polypharmacy is bad, but we're just pointing out this is something we want to watch, both from a health perspective but also from the financial perspective.

So just moving along, what we call conversation starters, because the point of this project is to start us collectively talking about how can we as a society improve our health: Expansion of national exercise guidelines to include sleep and sitting, drawing attention to the point that people need to get enough sleep. So maybe we sit less and do a little more working, and you can actually restructure the workplace to do that. We've seen some pilot groups where you have call centers where you're sitting all day. People can put on a headset and stand up basically and do some of their call center work. When I saw this research, I take most of my conference calls standing up nowadays. So there are lots of different ways you can work it into your routine if you just make it a habit.

We also want to look at improving the accessibility of the cost of fresh produce, because there's a lot of evidence accumulating that basically people eat too much meat and not enough fruits and vegetables. And finally, nudging behavior, possibly looking at these wearables to help you track in your notes a healthy behavior. So these are the things that we are just putting out there as possible conversation starters to see would these work on a wide scale.

I want to move on to financial security, and so here's the same graph we looked at before, where we have different metrics for financial security. Each vertical line represents an age group, starting with 25 to 34. In this case again, the open circles represent 20 years ago; the closed circles represent as close as possible to today. And really, we found really some ominous trends here in financial security.

We had three different types of indicators. We had cash flow, and so those indicators, one was earnings above, near poverty, and how we define your poverty was 200 percent of the federal poverty level. We identified a number of studies which showed that, quote/unquote, "bad things started to happen" when you had income below 200 percent of the federal poverty level. You had higher rates of morbidity and mortality, high rates of violent death or abuse, lower rates of education, and so we were using that as cutoff for trying to assess how much income might you need to try and get into the more favorable zone of morbidity and mortality. We also do have emergency reserves, and you measured that as could you meet a $3,000 emergency. We looked at debt, and is the debt at a level which is going to inhibit your asset-building activities.

We then—the next category was growing assets, so what percent of Americans as owning homes, what percent participate in retirement plans, and then what percent have other investments. Let me just define your retirement plan was either a 401(k) or an employer's sponsored plan at work; it was an IRA, or it was an annuity that you bought on your own. Whereas other investments might be a stock brokerage account or a bank account.

And, finally, protection: What percent of population has health insurance, life insurance and some kind of disability insurance, whether it's long-term disability in your working years or you had some kind of protection against a long-term care event in your retirement years.

So overall trends were down. Let's just dig down on the trends a little bit more. Poverty or near poverty is more common here, and so what we're doing is comparing, just 14 years ago, one of three young adults now are in the near-poverty or poverty level, versus one in four just 14 years ago. And so there's been clearly a backslide here in the percentage of Americans that are living at this near-poverty-or-under level.

I do want to draw attention to the bars on the right, which are 65 to 74 and 75 and up, and we've painted those in gray just to trigger this discussion. You might conclude here that older Americans are more likely to be in poverty or near poverty than younger Americans, and you really have to take the data with a grain of salt, because remember, we're using national databases that might have been constructed for another purpose. And it's interesting: We're taking off some of these databases that are constructed by economists, and some economists do not count withdrawals from savings as income, and so a retiree might be living off withdrawals in savings, but it's not counted as income for the purpose of these indicators. And so this is just pointing to a need for the older population of having better definitions of income for the purpose of meeting your daily living expenses.

As I said earlier, emergency coverage is less pervasive. We were measuring what percent of population could cover a $3,000 emergency. What we've seen is that this can be an inhibitor to building assets, and so we think this is kind of a predecessor or a precursor to building assets for your long term.

You've all heard about student debt skyrocketing. Other debt is also increasing, and the big question is, Is this increasing debt getting in the way of other activities like buying homes or saving for retirement? And so the answer really isn't conclusive yet. With respect to our millennials who have substantial student debt, is that holding them back from saving for retirement? The evidence was mixed. We do see, as you'll see soon, that less younger people are buying homes, and so that might be because of student debt, but also might be because they just haven't settled down as quickly as their predecessors did, and so that's an open discussion.

So here's the graph I was talking about. Asset-building activities are in decline. The left set of bars are home ownership, and so what we're seeing is really a decline in home ownership consistently across all but the last two age groups. We're also seeing a decline in retirement plan participation. These particular graphs are just showing on home ownership just what percent of the population owns their home, and on retirement plan, it's just what percent are participating in a plan. A separate set of numbers that we did that aren't in the report, but we had collected, really, were what percent of the population were contributing at certain thresholds, like 5 percent of pay,10 percent of pay or 15 percent of pay. And in those cases, again, it had been declining, and actually what's interesting is that if you look at the graphs and what we're seeing it's actually kind of predictable. Home ownership and retirement plan participation was rising up until the Great Recession, and then it took a big dip since then, and so I think it's only obvious that the Great Recession had a big impact both on homeownership and retirement plan participation.

The last one I want to show is health insurance coverage, and here is indicating a breakdown. So far, we've just shown the indicators in aggregate, but in the study, we broke it down a number of ways: By gender—not by sex, but by gender. We broke it down by income quartile. We broke it down by educational attainment, and that's what this one is showing, and this is health insurance coverage. We also broke it down by ethnicity. And so these are breakdowns that are in the report. There's just a wealth of data here. But what we show—what we saw here is, for the bottom quartiles, either whether it's by income or by educational attainment, we saw a gradual decline in health insurance coverage until 2014, when the Affordable Care Act kicked in, and then you can see these upturns, and actually the bottom three lines here. And so we think that's directly attributable to the ACA. As you probably all know, this is something that is in doubt now, with the new administration, and so the big question is, we've got 20 million more Americans who have health insurance coverage because of the ACA, and that's now in doubt, and so we'll be measuring this. We'll want to see how this happens, but this is going to take three or four or five years to play out.

So just as conversations starters for financial security, I think student debt and other levels of debt are something that we need to examine. All too often, I think, parents and their children get into student debt without really thinking that they have to pay it off later. And so actually, if you apply the same kind of disclosure agreements that you apply for taking other loans of student debt, we might see different outcomes. We also might want to look at the way people get education: Do we need to be more focused on occupational training? A big one for us is lack of retirement plan coverage for those people who don't have a retirement plan at work, and so a lot of improvement could be made if roughly half of the population that works could have some kind of retirement plan where we have automatic enrollment—automatic investment, because we've seen that that's really helped a lot for those workers who do have those kinds of plans.

The last [set of] metrics that we put together was social engagement, and this has been getting a lot of attention recently. One of the statistics we like to throw out there: There's some research that supports the idea that being socially isolated has about the same morbidity and mortality risk as smoking and maybe twice the risk as obesity. And so I think this is another thing that we need to start drawing more attention to, particularly for the older population, as people—as their friends or relatives die off or if they become widowed. It's just that this is a real problem that we want to draw attention to.

So, again, looking at this chart, the vertical lines represent what percent of the population that's, quote/unquote, "doing it right," for each of the age groups. This first chart shows all of the indicators aggregated together. Just to go over what those indicators are, we have two categories. The first one is meaningful relationships, and really, that's how many interactions do you have with your spouse or partner. Now, there's a pretty low bar here, because we're saying at least you want to have one meaningful interaction with your spouse or partner each week. Okay.

CYNTHIA HUTCHINS That's interesting.

STEVE VERNON: Whereas interactions with family, we're putting at three per week, so I don't know how that's come out. Support from family—what percent of population says that their family could be there for them in an emergency. Interactions with friends—three per week. Support from friends. So these are all meaningful relationships, and what we're seeing is that this really is important, particularly as you get older and you get health care, health costs, you get in the hospitals. Having these, this band, this convoy of help is becoming increasingly important for people's health and well-being. Just to tell a personal story, one of our friends had a real severe bout with cancer, had a crisis, and the whole family went to the hospital, had basically 24-hour vigils, and she pulled out of it, and the doctor said, "What a tough bird she is," but actually we think it was the family support that helped bring her back.

Group involvement: Neighbor contact, one per week; volunteering; working and participating in religious or community organizations—again, we're looking at participating in groups is an important thing for your social engagement.

Just to dig down a little bit. Married or partnered, coupling is still the norm, although, so we're not really seeing much difference in people getting married or living together. Two things I want to draw attention to are the bars on the left. What we're seeing is the younger age group, if you just look at marriage rate, that has declined compared to their predecessors 15 or 20 years ago. But if you count living together, it's actually pretty close. So we don't know yet whether those youngsters are going to get married or just continue living together. On the right, we're seeing a pretty significant increase in 75 and up getting married—*being* married, excuse me. I have to choose my word carefully, because it's not because those 75-year-olds are running out and getting married; really, it's more a benefit of survivorship. More people are surviving, more married couples are surviving into the 75-and-older age group, and so really this is a result of improved mortality.

We're seeing less social engagement with neighbors, which is a little troubling. One of the troubling aspects with people age 55 to 64, and so we dug down on this—this is for the baby boomers—and across most of the indicators, we're seeing less social engagement among the boomers, so that's something we're scratching our heads over. Is this troubling or not? In this particular graph, it's kind of a fan graph, and it's each indicator. The purple represents today versus the gray represents 15 or 20 years ago. The only place where we're getting more of it today than we were 15 or 20 years ago was on working. Maybe that is the case. If you're working longer, you're not being socially engaged in other aspects. So once again, we don't know if this is troubling or not. We're kind of troubled by it, and again, we think more research would help.

Volunteering: What we're seeing here is across all age groups, about 25 percent of the population are reporting that they're volunteering, but what we're seeing is that the average hours, though, volunteered are much higher for the older groups, which makes sense. But we're seeing studies indicating that if you're volunteering, not only are you doing good for society, but that actually gives benefits back to the individuals in their health and longevity. And so once again, we're running a pilot project; we'd love to do more research on that that would track volunteering across many years and to see how that might impact your health and well-being.

So conversation starters with social engagement: We're really thinking, you rethink what social engagement means in the workplace, because that's actually where a lot of people get their social engagement while they're working, and how do we actually have those benefits continue when you're retired. You might want to design work in community environments to support social interaction and particularly start encouraging volunteerism among those 55 to 64 years [old] who are approaching retirement. And so one thing we would dearly love to see is part of a retirement readiness program. What we've seen is that if people start volunteering while they're working. they're much more likely to continue volunteering when they retire. So how could an employer facilitate as part of that transition from working to retirement? Maybe setting up some kind of volunteer program is something to look at.

So this wraps up my summary of the report. I would love to talk about this more in the reception area or other times. I'm going to also get Q&A from us after the panelists have discussed.

We also would like to thank our sponsors. This research has been sponsored by a number of financial organizations. We would also like to thank *Time* magazine. They gave us a lot of publicity on this, because really, what we want to do is get the word out to Americans, because just to kind of repeat what I said at the beginning, we think that behavioral interventions, both on an individual basis, on a societal basis, on a community basis—this is almost like low-hanging fruit and improving the health and longevity of Americans, and so we're hoping that we can focus attention on that as well, in addition to all the medical technology that are also giving us dramatic improvements.

So let me turn to our distinguished panel. Cindy, can you talk to us about what things Americans should be thinking about as they plan for their own longevity? And I know you and Merrill Lynch have done work around what you call the seven life priorities, so if you could talk about that and, really, just talk [about] what are some of the challenges and opportunities that Americans should think about as they approach retirement that could last 20 or 30 years. So the podium is yours.

CYNTHIA HUTCHINS: Great, thank you. So let me just start this conversation by telling you a personal story, and that's the story of my grandmother. About four summers ago, my grandmother passed away at the age of 96. Now, she retired when she was 55, so if you do the math on that, she was retired 41 years and by the way, that was 11 years longer than she had worked. I think that if you had asked my grandmother how long she thought she would live into retirement, she would have said 10, maybe 15 years, and as it was, she had 41. And I can remember on her 70th birthday, my brother being just incredibly angry with me. By the way, her 70th birthday fell on a Wednesday, but he was angry with me because I couldn't be there on that actual day when she was turning 70. And he said to me—I'll never forget it—he said, "Cindy, I can't believe you're not going to be there on Grandmom's 70th birthday. We don't know how many more she's going to have." And she had 26 more, so kind of crazy.

So when we think about this idea of longevity—and when I first got into the financial services industry, it was over 30 years ago—we used to think about retirement was being 10 or 15 years, and the idea was to accumulate as much money as we possibly could, and at the end of the game, when your retire, we would tell you how much income you could have off of those investments without running out of money over the next, say, 15 years. And so we recognize that the world has changed, and we recognize that this idea of living 20, 30 or even 40 years in retirement means that our lives are going to change sometimes several times over that time period. So we kind of took a step back and said, "Okay, how does this change how we plan financially for retirement?" And what we did is we came up with this idea that we have to plan around the priorities in people's lives and try to assign a dollar value to those priorities so that people can live the best lives that they can, based on the income that they have and what they want to accomplish around each of these life priorities.

So the life priorities are family; home, where we're going to live in retirement; our health, how are we going to plan for the cost of health care and maintaining good health; giving, how do we want to give back both to family and to communities; the role of work in retirement; how we're going to spend our leisure time; and then finally, finance. And it's not that we think that finance is the most important thing, but what we do acknowledge is that finance and getting that piece right is what makes the goals around those other life priorities happen.

So what we did is we embarked upon a series of studies, one around each of those seven life priorities, and we did this in partnership with Age Wave out in California, and we did some in-depth study on each of these life priorities. And so we started this about three and a half, almost four years ago now, and we have released six of those seven studies. So the finance study is sort of our capstone study that will come out in February, but I'll share with you just one or two points about each of these life priorities that we discovered in the studies.

First is around family, and what we found is that people are very, very willing to work longer and even forgo their own retirement savings to help out a family member. And what we're seeing is that more and more people are providing support to their children, and we're also seeing that more and more people are providing support to their aging parents, both in terms of financial support and physical and emotional support, especially around elder care and caregiving.

We call the person in the family that provides that financial support the "family bank," and the reason we call them the family bank is that there's typically one person in the family that people will come to over and over and over again when they're in financial distress. So just by a show of hands, how many of you have lent money to a family member over, say, the past five years? Keep your hands up. And then keep your hands up if you expect to get that money back. So look around: All of the hands went down, and this is what family members are reporting—that they're more than happy to give money, it may seem like a loan, but it's probably not going to be a loan. And so it's important that people factor that into their plans as they move to and through retirement.

In terms of home, what we discovered was a little surprising, because we tend to think, as people are getting older and they're moving into retirement, that they're more likely to downsize, and that's kind of been what we've been taught to think all of our lives. Kids move out, you get older, you move to that two-bedroom condo rather than four-bedroom home. And, in fact, what we found is a lot of people are upsizing, and the reason that they're doing that is that they want to provide a home where the children and the grandchildren can come and possibly stay for a period of time as families are spreading out all across the country.

In terms of giving, I thought this was one of the most interesting studies that we did. The first thing, especially coming from financial services, is when I think about giving, I always think about it in terms of how can I help clients pass their assets down to their heirs in the most tax-efficient manner. But the general public, the people that we surveyed—they're not thinking about giving that way. The No. 1 thing that they think about when they think about giving is to give back their values and their life lessons and their experiences to the people that they care about.

One comment on volunteerism, because, Steve, I thought you hit the nail on the head about retirees that are more likely to volunteer: What we did is we kind of calculated the amount of money that people are giving to charities—the over 65s, that they're giving to charities—as well as the amount of time that they're volunteering, and what we calculated was that over the next 20 years, retirees are likely to either give time or money to the tune of $8 trillion. Now, what's interesting about that is the average retiree volunteers 49 minutes a week. Now, when we pull that 49 minutes out, some are volunteering nothing, and some are volunteering much more than that, but the average of all 65-plus volunteers are volunteering 49 minutes a week.

What's interesting about that is that they're watching about 50 hours of television a week, and so if we could get volunteerism up to the people where each of those retirees sacrifices one hour of TV time for one hour of volunteering, that $8 trillion goes to $12 trillion over the next 20 years, so there's a big opportunity in terms of giving back.

Our leisure study—one of the most significant things that came out of that study was that when people think about how they want to spend their leisure time, they kind of think in terms of their everyday leisure versus those peak experiences, that adventure leisure, or "I've always wanted to go to Italy" or whatever it might be. When we took a deeper dive into that, though, what people told us is that it's really much more important to them who they're sharing that leisure time with, rather than what they're actually doing with that time. So it kind of lends credence to this idea that staying socially engaged and not becoming isolated is very important.

Under health, this was probably the most thought-provoking and perhaps shocking study that we did. We asked our survey respondents what was the most important key ingredient to happiness in retirement, and 81 percent told us it was good health. And by the way, finances ranked at the bottom, which I thought was really interesting. So good health was No. 1. So we went on to ask, "Okay, what is the most worrisome disease associated with living a longer life?" And 54 percent of the respondents said it was Alzheimer's disease. Now, that's significant for two reasons. The first reason is that that 54 percent represented more people than said heart disease, cancer, diabetes and stroke combined. Now, if I had asked that question 20 years ago, what do you think the answer might have been?

VEKEVIA JONES: Cancer.

CYNTHIA HUTCHINS: Cancer, right. But now it's Alzheimer's disease, so we went on to ask, "What about Alzheimer's disease specifically worries you the most?" And the No. 1 answer with that was that people did not want to be a burden to their family. And when they're talking about being a burden to the family as it pertains to Alzheimer's disease, it's not just that financial burden, but the physical and emotional burden that the family goes through as they're trying to care for that loved one through a disease that renders them helpless over time.

Finally, work, and this was the one that I thought was the most fun. What we found in our survey was that people were completely—not completely, but mostly—unaware of the intangible benefits that they got out of working. We asked a group of preretirees what did they think that they were going to miss the most after retirement about working, and the majority of them said they would miss the steady paycheck. Then we went and we asked retirees, "What do you actually miss the most, now that you've retired?" And they said that they missed the social connections. That was the No. 1 answer.

And when I think about the role of work, there are more and more—to Steve's point, more and more people are working into retirement, and that could be why we see that decline in volunteerism. But more and more people are working into retirement, and they're not necessarily working for the paycheck, and so just a little story about that.

I had the pleasure of being in a meeting in Washington, D.C., where one of my colleagues, who had been at Merrill Lynch for 38 years, was retiring, and about three weeks after his retirement, he came back to talk to all of his colleagues in this meeting, and he spoke for about 10 minutes. He spent the first 30 seconds talking about the pieces he had put in place to get his financial house in order. Now, think about this, this is the man who has spent 38 years in financial services, and he gave that 30 seconds in his farewell address to his colleagues. He spent the next nine and a half minutes talking about what he already started to miss as he went through retirement, and he'd only been retired for three or four weeks. And he ended in the last 30 seconds—he got very choked up, and he said, "You know, on that last day as I closed the door to my office for the very last time and I started to move toward the elevators," he said, "I heard that buzz that you hear in a busy office, and the financial advisers were doing what they do. Some were getting ready for the next day, some were on the phone with clients, some were meeting with clients, and many were just talking to each other and exchanging ideas at the end of the day." And he said, "As I got to the door and I reached for that doorknob to go to the elevator," he said, "all I heard was silence." He said, "Nobody really told me to think about what Monday morning was going to look like. Nobody told me to think about how I was going to stay engaged, how I was going to stay relevant and how I was going to stay connected." And so that's really an important consideration when we think about not just the role of work with these life priorities, but the role of all of those life priorities in keeping us connected, in keeping us an active, engaged part of society.

So, Jim, I know that you have a lot of work that you've done around this idea of socialized isolation and how it can affect not just your health but every aspect of your life, so would you mind coming up and addressing that a little bit?

JIM TOOLE: Sure, thanks. I love the way you put it with relevant, engaged and connected looking at three components: the financial piece, the health piece and the social engagement. I want to ask the audience and get a little bit of a sense, how many folks here on a regular basis think about their financial plan for retirement? That's pretty good. And how many people go to their doctor, try to stay healthy, use their Fitbit? How many people try to stay healthy in anticipation of a healthy retirement? That's even better, so that's consistent with the findings. And so I want to ask how many people invest and take steps to make sure that you have the social capital that you need to retire? Not nearly so many. This is critical, and so many of us forget about this third leg of the stool, which in many respects is even more important than the first two, because it contributes to those two aspects.

Let me tell you a story from personal experience about my family, my father. He's outgoing, he is smart, connected, financially in great shape, healthy as a horse. He's 91, former president of the World Federation of Neurology, and a role model for me. When he retired, it's like he lost everything of value. He was bitter, he suffered cognitive decline, he didn't maintain friendships and didn't understand how to socially engage outside of work. My mom—five years younger, and she's doing great. Nothing changed. Her life kept going forward. The relationships she had and maintained, the social capital that she invested in the community continued to pay forward into her retirement. Now she's Dad's caregiver, and I learned this very important lesson at age 53 that if I don't maintain my social relationships and develop my friendships and my social capital, that this is just as important as the financial savings.

So let's briefly talk about the impact of social networks on health. Sociologists and epidemiologists have been studying the impact of social networks on health for over 50 years. There's significant documentation on mortality (twice that of obese individuals) and impact on a range of health functions (morbidity comparable to smokers and impacts on both mental and cognitive health). If we step back just for a minute, it's important to understand, just like we understand finances have different components, e.g., savings, cash flow, etc., what is a social network? The primary relationship of a social network is spouse and partner; secondary, children, family, friends and neighbors; and tertiary is community engagement, clubs, organizations and activities. And all of these impact your mortality. Mortality for men is 2.3 times greater for those with the smallest networks versus the largest networks, and for women, it's 2.8 times for women with the smallest networks versus the largest networks.

And sociologists are now starting to think about loneliness instead of networks. They're comfortable with the idea of self-reporting: How lonely are you on a scale of 1 to 5, just like you have pain scales in the doctor. They don't think of loneliness as a weakness, but as a medical signal like hunger or thirst or pain.

So in Britain, we've heard some good conversation about this issue in this meeting. It is recognized that there's an epidemic of loneliness, and it's a serious public health issue that can be treated with public health interventions. The extent of loneliness has become a policy concern about in our advanced society, so there are programs for mitigating loneliness, social programs looking for the signs of loneliness, and finally, identifying what it is that's preventing people from leaving the house. Why are people watching TV for 50 hours instead of spending an hour volunteering? Why can't people get out? What are the barriers to change? These are the same sort of questions we ask about the barriers to saving for financial health.

So what is the impact of loneliness on health? It eclipses obesity as a predictor of early death. It affects key bodily functions, including mobility, activities of daily living and mortality. There's mounting evidence linking loneliness to mortality, physical illness and cognitive decline, and it's consistent with findings that are currently being studied on solitary confinement. And something that is not surprising: There's a co-morbidity between loneliness and long-term disability or illness.

People are living alone and longer. One-third of Americans aged 65 and older live alone, whereas one-half of those aged 85 and older live alone. And there's a number of contributing factors; increased longevity, decline in marriages, increases in divorces, childlessness and family mobility have all contributed to this. Only 20 percent of Americans live in "traditional" households consisting of a married couple and children.

So I've heard mentioned earlier today the concept of elder orphans. These are individuals who are no longer capable of making their own emergency medical decisions and have no designated surrogate. So the concerns of the elder orphan populations include legal and care issues, the idea of affordable housing, transportation and mobility. Mobility is critical to getting people out of the house and into the community, and beyond institutionalization. New living arrangements include aging in place, cohousing, intentional communities supporting intergenerational contact, technology-enhanced activity, and age-friendly public policy models of living and care.

So, finally, I want to talk about making friends and keeping them after a certain age. Now, I think all of us can understand that it's easier to make friends when you're in high school or college or even in your 30s, but how do you do it making friends of a certain age? Well, I think we need to understand the conditions for creating friendships; it isn't magic. One, there has to be a proximity. It's very hard to create a friendship if you're not in a reasonable contact with individuals. You need to have repeated unplanned interaction, spontaneity and a setting that encourages people to let their guard down. Well, if you think about when you were 20, what made you let your guard down, it might have included listening to music or going to bars or other activities surrounding a party, and that doesn't happen all the time anymore, for me at least. But work environments can form these relationships, and that's why they're so satisfying for so many people. Religious settings, volunteer settings—these are all sorts of environments that help create those conditions for friendships. And as we age, we interact with fewer people but grow closer to the friends we have. But I'm going to say, like saving for retirement, we need to invest in social capital now, like your own personal 401(k).

Now, as one final kind of exiting discussion, what is the impact of social capital on all of this? I mean, I've got my parents on one side, my wife's grandmother on the other, and my kids. So I'm seeing all sorts of exciting interactions going on—people forming communities that virtually meet on a regular basis and get back together, once a month or once a year. But there's, on the other hand, the idea of the atomization of experience. There are concerns that video games isolate people. Well, that's the same discussion they had about the television two generations ago and radio three generations ago. So we're having these same conversations, but the Internet is doing a wonderful job creating the opportunities for groups of like-minded people to come together: knitting, books, gaming, woodworking. You name it, there's a group for you out there. They just have to pick up Google and find it.

So I would finally ask what are the types of disruptive technologies that can impact aging in place or these sorts of problems of loneliness. What are the Airbnbs or the Ubers of the world?

Well, quite frankly, both of those can help. Ubers can help get you out. Airbnb can bring people into your life. Likewise, it can find a handyman; it can find medical treatment. And finally, what is the last mile? What are the challenges between getting those last-mile services to your parents or to the elderly?

One final story: My wife's grandmother recently entered a home just this year. My three aunts were taking care of her as well as they could, but she was deteriorating, and nobody could keep up with the situation. The doctor's prescriptions weren't being followed, and she was falling, but everybody thought if she left her house, she would die—that she needed her family, she needed her friends, she needed to be in her community. But when they put her into the assisted-living facility, she flourished! She was excited to have new friends around her, a new social network. The doctors were keeping up with her prescriptions. Now she comes home for the holidays, but then she can't wait to get back to her new home once the holidays are over, because she doesn't have to deal with all the mess! So anyway, that's my personal experience.

The financial aspect is just as important, if not more so, and I know you have a lot to share on that, if you could come and talk to financial security.

VEKEVIA JONES: Sure. Thank you for that.

So, you know, I think Cindy made a good point when she mentioned that a lot of people, when it comes to the financial aspect, they put that at the bottom of the list of the things that they want to think about or plan for. And I think a lot of that has to do with the fact, if you look at how we market it or how we talk about finances when we bring it up, it's more of a to-do list.

Now, I don't know about you guys, but most of the people, especially married couples, that I speak with, they don't like the idea of their spouse giving them a honey to-do list, so when it comes to finances, you hear, "Hey, take control of your spending, pay yourself first, clean up and protect your credit. Take your risk tolerance questionnaire; make sure you're invested properly." Those are all things that technically, we know we need to do them, but we have a hard time relating them to anything that matters to us. So that's why you see this new movement, really, of financial wellness, and it's become more and more of a reality, even for employers. They're realizing that, hey, if we don't help people get their finances together, maybe they're staying on the books longer and working longer and not retiring and then it's a cyclical effect that we can't actually hire more people to replace individuals that truly aren't excited anymore about working anyway; maybe they want to retire.

So as people try to plan for retirement or [are] just moving forward in life to go through different seasons, the financial aspects are a part of it, because it is important. Yes, we have our loved ones, and we know we want them not to worry about us when we leave. We want to take care of them, but it's going to take money to bury someone. At the end of the day, those things are going to tie back into the financial aspect.

And so, where the financial wellness piece really comes in is trying to get people to take something that's very, I would say, intangible. Retirement is the thing that, no matter what age you are, it's really tough to picture what that might look like. You know, if it's 20, 30 years away, it's tough for apparent reasons, and even if it's only 10 or five years away, you've spent most of your life through a season that has nothing to do with retirement, and now you're expected to start planning for retirement. And I think that's where most people have their issue is trying to make it something that's tangible now. I have all these other priorities in place now. Maybe I have a sick parent, or I'm just trying to put my kids through school. I need somebody to make these things tangible to me now, to make me actually save for retirement.

And a lot of the things that we look at [at] Financial Finesse, which is the company where I work, [involve] having conversations with people about their goals—trying to have someone understand and start thinking about what do you really want out of life, where do you really see yourself. How do you want your family to live? Are you a minimalist? Do you desire luxurious things? Are you materialistic? Whatever those things might be. But learning that about yourself helps you. We spoke about fitness as far as your health. Well, you also have to look at your financial fitness. Are you on target to actually live the life that you dream of? And I think if we can help people see that retirement is not some place that's in the distant future, this goal that you're trying to get to for saving, what you do now and over time all the way up until then, trying to plan for retirement, it affects all of this. It affects all of those years that you spent before you actually retire, and maybe then it helps you figure out, okay, do I really need to go buy this house that we're looking at? How is that going to affect me over time to help me with all the other goals that I have in place? Like, I want to send my kid to a good school, or you know what, my parents haven't saved enough for their own retirement. I actually might end up taking care of them, so maybe I want to think before I buy the new car or take the extra trip this year, to actually factor in the reality that might happen. And not only that, but it's encouraging your family members, including your parents or your children, [and] having conversations with your loved ones about what is your plan for retirement.

Some parents may be saying to themselves, "Oh, I'll be fine. My children will take care of me, or another family member may take care of me," but what if that's not the case? What if that's not what they have in store for you? So that's something that all of us really have to think about when it comes to the financial piece is, What if the plan that I think is going to work out isn't really actually a plan, [but] it's just a thought in my head that I haven't shared with anyone, and therefore I have no plan, and I find myself, dealing with the situation where I never wanted to be? Maybe years ago, I would have made a different decision about how I invested or the risks that I took or the purchases that I made, if I had known or planned for something like this.

So I think when people sit down with advisers and they sit down with planners, they have to actually have those types of conversations and not just, "Okay, you have extra money; let's get this invested." It's bigger than that. It's "Okay, what is your goal? What do you really want out of life? Where do you see yourself?" And then let's use financial products and services to meet those goals, because then I think that the issues that we're having with people [involve] not saving enough, not even having an emergency fund. Well, if you don't really know why you're putting funds aside, well, when something comes up, you might be tempted to pull from your retirement account or from places that you really shouldn't be and make bad financial decisions, because you haven't really linked it to anything of what your goal is.

A person steps on the scale, and they know, "Hey, I need to lose 20 pounds," because they had a goal for their health. Or I need to go running because my goal this year is to lose 20 pounds. So people have to also figure out what are their financial goals that they're going to go after.

And then it really comes down to—once you've decided that and you know who you are and where you want to be financially, that keeps you on track and along the lines—yes, you do need to pay yourself first. You do need to be contributing to your 401(k). Take advantage of the tools and resources that are available to you. Get the company match; make sure you're doing that. If you're in a situation where you know you need to get some help in terms of your tax situation, you're paying too much in taxes, these are all conversations that you need to be having. If you're savvy on your own, by all means you can do that on your own, but if not, you need to be speaking with someone that looks at it as a planner and not just a financial adviser. Those are all things that we all have to look at.

And then, along the way, managing our debt. It is a consumer society, where we might take on more debt than we really should, and we have to go back to our goal: Well, what are we trying to accomplish? Do I really need to take on this extra debt? And then how much extra debt am I willing to take on? Nothing is wrong with taking on the extra debt, but people don't think about what are they going to have to sacrifice to keep up with those debt payments or their lifestyle that they put themselves in to live within their finances.

And then speaking with your family members about your financial goals, whether [they] be your parents or your spouse. A lot of spouses aren't talking about those things or even meeting with their financial advisers or planner together. So oftentimes, it's the wife that's being left out of that conversation, and so if the husband were to pass away prematurely—and we know statistics show that most often the wife is outliving the husband—then they're left to try to figure all of this stuff out that they hadn't been involved in over the years to try to figure out with their husband. So that's something else that is a part of your financial fitness.

And along the way, you want to make sure that we're continuing to review our financial situation. It's not something that you just talk about today and then you look at it again in 10 years. You should be meeting with your spouse every three weeks or at least once a month and reevaluating and then, as you get closer to retirement, making sure you look at "What is my budget going to be in retirement?" and thinking about that as well.

So I think it all boils down to all of us knowing what exactly we want out of life and making sure that we sit down with someone if we're not comfortable with doing it on our own, to see if we're properly invested and not being more aggressive than we should be, based on our goals and our actual risk tolerance for seeing our funds fluctuate—making sure that we take advantage of situations where we say, "Well, we don't want to leave. If something happens to me and I can't work anymore, who am I going to be a burden on? How much disability insurance do I really need? Is the disability insurance that I get through my employer enough, or do I need a supplemental policy even outside of that?" So, just looking at any of those things that may come up that may have negative consequences on you and your family, and then deciding, "Okay, how can we best protect that?" And then there's a number of ways to do it. And you know when you pass away, making sure that if I were to pass away prematurely, that my family would still be taken care of, and in what ways would I do that.

So, yes, it's saving, it's budgeting, it's looking at disability insurance, it's making sure you have life insurance in place. And it's all of those things which are important—making sure we pass our assets on to our heirs the way we really choose. But I think the main piece is linking it back together for something that's important to us in our own goals from a financial perspective.

STEVE VERNON: Okay, well, thanks, Vekevia.

VEKEVIA JONES: No problem.

STEVE VERNON: So this is the section of presentation and workshop where you can ask questions. So I've got a couple of questions to prime the pump, but before I do that, anybody want to get up and ask a question or discuss something? The mic is right here. And please identify yourself when you get up, please.

JEAN-CLAUDE MÉNARD: Jean-Claude Ménard, Canada, and Canada is important, you will realize soon. What an impressive slate of speakers. What a wonderful group of speakers. You were, all four—it was a great speech.

STEVE VERNON: Thank you.

JEAN-CLAUDE MÉNARD: But I have a question for you, Steve, and it relates to slide 9. And on this slide, you have a list of—.

STEVE VERNON: Can I get the slides, please? He's going to get slide 9 for us.

JEAN-CLAUDE MÉNARD: So you have a list of avoiding risky behaviors, and the session is Insights Into Successful Aging, and you put not smoking, obviously, avoiding illegal drugs, not binging on alcohol and sedentary behavior. I want to know why you did not add living in a gun-free environment.

STEVE VERNON: So thanks for the question. There's a big part of me that agrees with you. The process of coming up with these indicators, as you can imagine, was hotly debated, and this actually did come up, and for various reasons somewhat political, somewhat in the data there, we had to kind of whittle it down. So, I'll repeat, this is not the all-inclusive list, and I would like to include that, but we just, for lots of reasons, didn't. Thanks for bringing it up. Anna.

ANNA RAPPAPORT: I'm very excited about the study and loved all of your comments as well. On the social engagement topic, I'm very interested in the question of going a step further and saying that beyond social engagement, that a person should have something they are passionate about. I'm interested in your comments about that.

STEVE VERNON: Okay, so I'll keep talking about the process, because it really was fascinating. We did debate an indicator of something you're passionate about, and the social scientists that we work with would agree with that, but then the question is, Is there a database that says—that measures—are people passionate, and has this been done year after year after year? And the data just wasn't there, and so once again, this wasn't an all-inclusive list as to what you should be doing; it really was trying to focus on indicators that we felt were important, and there was data there that could measure this across the population. And actually, one of our ideas is to try and encourage better data being collected, so that could be on the list.

ANNA RAPPAPORT: I have a different suggestion: that you think about having an addendum or appendix or a comment that said, "Here are some issues that came up that people agree are important, but we didn't really have data to measure them. However, they are things to think about and maybe to collect data about." In any case, they're issues that came up that are important.

STEVE VERNON: That's a great idea, and we'll add gun-free environment to it, too. Thanks.

ANNA RAPPAPORT: And as long as we're putting you on the spot, student debt is a clear situation, that it's causing a lot of problems, so I'm kind of curious about why it's not conclusive.

STEVE VERNON: That was my original thought, was how can it not be a problem, but I saw a study, and I forgot who did it, but they were basically looking at contributions to retirement plans for people who had student debt and people who didn't, and there wasn't any significant difference. In other words, getting a college degree is a good. It does help you have higher earnings capacity, and so actually we found there's plenty of evidence that there are people who have lots of student debt, they're still buying a house, they're still contributing to the retirement plans, but student debt got them a good job. And so that's why I say the evidence is mixed. I think the worst thing they could do is get a lot of student debt and not get that degree, and so there was a group we identified there, that that's probably not a good idea. But it's just philosophically, I think, you need the management, but we want to measure the data there, too, so that's my answer.

JOHN ROBINSON: John Robinson, Minnesota Department of Commerce. I really appreciate everything that all the speakers said, and I don't have any much argument with anything, but there is one thing: You asked Cindy the question of how many of us have lent our children some money, and several hands were raised; then you asked how many of us expected to get it back, and a number of hands went down, including mine. Finally, you said, "Well, maybe you're happy about doing that." Uh-uh! I wasn't necessarily happy about not getting the money back, and it wasn't so much the money, but it was just the idea that I want my daughter to be independent and to pay that money back, so that's the only correction I had.

And on the point about student loans and the fact that there's no difference in the contributions, I think I've heard that myself. And I think a part of the story is that the younger folks are not buying cars, and maybe they're able to put away some more savings. Thank you.

STEVE VERNON: Thanks for sharing that.

ROLAND RAU: Roland Rau, Max Planck Institute for Demographic Research and University of Rostock. This is the Society of Actuaries meeting of the United States, and what I learned here or heard is that social engagement, volunteerism, like volunteering, being socially still involved with friends, family or other organizations—this is what matters to people at retirement ages. Due to population aging, more and more people are at retirement age; this is nothing specific to the U.S., but to many other countries as well. Do you have any experience whether this is transferrable in terms like what is the fear of people when they get old? Is it financial trouble or like losing friends? Do you have any experience whether this is a typical finding for the U.S. or whether this is also applicable to other countries? Maybe a funny side remark: I'm chairing currently the Department of Sociology and Demography. I rather felt reminded about your findings about social networks. I thought, "This is an actuarial meeting, right? It's not a social network meeting." Thank you.

CYNTHIA HUTCHINS: I'll just comment a little bit on that. I don't personally have any data or statistics around that, but I will tell you that over the course of many, many years, we've all kind of been brainwashed to think about retirement in terms of financial: How much money do I need to put away? And so I think that what we're trying to accomplish, at least with our studies, is to educate people around the intangibles that they need to be thinking about, that they might not know they need to think about, and that would be one of them.

One of the things that is pretty clear is that as we age, our social circles shrink, and they shrink for many reasons, not the least of which is that as we get older, we place more value on the quality of a relationship, rather than the quantity of the relationship. And so, if we are not cultivating many, many relationships as we move into our older years, just by attrition, people die, people move away and go live in institutionalized settings or go live with family that lives in a different state or whatever it might be, those social circles shrink, and we have not put a lot of effort into increasing them, because over the years, we've been quite happy with the quality of the relationships that we have. And so educating people about that as an issue and encouraging them to find common ground may not be terribly deep relationships at first, but if they find, to Anna's point, something that they're passionate about and cultivate that, then they'll meet like-minded people and be much less lonely in their older years as that social circle starts to shrink.

JEAN-MARC FIX: Jean-Marc Fix with Optimum Re. We are familiar with the old model: You work and save, and then you spend in retirement. We are also familiar with a more dire model, where you work to retirement, then you work after retirement as well, because you can't afford to retire. What about different ways of making money as you get older? There is a whole social movement, I guess, and Uber [and] Airbnb are examples of that. There are now ways where you can monetize some of your assets that used to be hard to monetize, like your house. Steve described that quickly in one of his slides. Can any of you comment on alternate ways to make a living? Because one thing is sure: Not everybody retires the way they want to retire, money or no money.

STEVE VERNON: So I saw a study earlier this year, actually last year: Something like 400,000 seniors are using Uber or some kind of gig economy platform, and it's increasing rapidly, so I would agree that's—whether it's a labor platform like Uber or Task Rabbit or an asset platform like eBay or Airbnb—I think it's a great way to supplement your income. And in certain areas, somewhere I've seen a statistic like 25 percent of Uber drivers are retirement age. So I think that's a good idea. I can't be more articulate than that, other than saying, yeah, it's a great idea.

CYNTHIA HUTCHINS: I think, just to add to Steve's point, we're also seeing people considering different living situations so that they can supplement income, but also to address the isolation issue, where they may be taking roommates that are—some may be younger, but in similar situations. So you have the 70-year-old who lives alone who says, "I've got this extra space; why not find another 70-year-old who lives alone who might like to have a little more social engagement that will pay me rent?" And so that's another way that people are doing it.

STEVE VERNON: Actually, if I could jump in there, when my daughter graduated from college, she rented a room from a retired couple, and they got the income. And I thought, "Great, she's got adult supervision."

CYNTHIA HUTCHINS: Yeah. What's interesting about that, I just read just a couple of weeks ago, NYU is actually starting a program where they're soliciting seniors to open up their homes to students for student housing, and it's mutually beneficial. But NYU is actually implementing a formal program for that.

STEVE VERNON: Just another example of what Cindy was saying: I wrote a column once called "The Golden Girl Solution"—and we're all familiar with that TV show—and actually did the numbers to show how four women who only had Social Security, widow's benefits or spouse's benefits could have made that work. And so that's just another model to try.

VEKEVIA JONES: I know some people—like, I know my father, for instance, is looking at it as an opportunity to start a career that he always wanted to start. So some people might do consulting if they don't want to completely leave the career that they were in or take it as an opportunity to go pursue what you've always dreamed of, too, and still be able to have some income from that.

STEVE VERNON: I think Anna and others have talked about age discrimination, and I do—my own view is that among the large employers, it's subtle, and it's not illegal, but it's still there. Some kind of self-employment or your own business doesn't have that age discrimination issue, and I think it's just a good—I can't say enough good things about it.

CYNTHIA HUTCHINS: One other statistic that I'll throw out there is that twice the number of successful businesses in the U.S. are started by people over the age of 50, versus people in their 20s, so to your point, people are seeing that there are some benefits to being self-employed in your older years. You call the shots.

ANNA RAPPAPORT: I wanted to jump into that social engagement discussion and think about other countries. I think the three basic factors would be universally applicable, but the environments in some of the countries are so different that it would mean an entirely different thing. Even within the U.S., I learned years ago, if you thought about communities like Pittsburgh or western New York, you had a lot of people living in the same neighborhood they grew up in, into old age. There are still places where people aren't moving around; residents are living in the same place with multi-generations. Families are together closer. So I think it's a really interesting question: How do you reinterpret—given the social system and the living structure in a different culture, how do you reinterpret these three domains, which I think remain important, but that may play out in entirely different ways depending on where you are?

STEVE VERNON: Yeah, I appreciate that, and actually, in our grand ambitions at Stanford, we would start doing these measurements in other countries, so we're just beginning, but we would love to do it in other countries. Yes.

ARNOLD DICKE: I'm Arnold Dicke. There was a movie called *The Heist* a while back with Danny DeVito. Danny is talking to somebody on the phone who apparently is saying he needs more money. Danny says to him, "Everybody needs money. That's why they call it money!" Only he can deliver that line; anyway, I can't.

But you talked a little bit about volunteerism, and you did talk about earning money in retirement to supplement your income, but one of the points that I don't think you mentioned was the idea that bringing in money has been a big part of your self-worth all through your life. If you've been a major earner for your family, I would imagine it's a big shock to go to earning nothing. I don't know if anybody's studied that, but it's a shock to your ego to say, "Hey, I'm no longer in that role at all." I've found that a lot of retired people who I've seen who were happiest were doing something to earn money. In fact, on my way out here, I had a driver from Dial 7, a car company in New York. He was one of the happiest guys I've ever seen, and I thought, wow, he's a just happy driver, but actually, he had worked in air conditioning and was very proud of his career. Now he had finished that career and is driving cars once in a while, and it just made him happy to do that. He obviously didn't need the money, because he had two homes—one in New York and one in Orlando that he was going to eventually retire to—so he wasn't driving purely for money. That's an aspect I haven't heard you talk about. Perhaps you want to mention something about that.

STEVE VERNON: Yeah, thanks for sharing that, and actually, because we're in the business, my wife and I have our antennae out for meeting people like that, and the more you have your antennae out, the more you find lots and lots of folks doing that. And I've seen retirement readiness programs being developed, and they always focus on the financial, maybe in health insurance. I think an equally important component ought to be planning for some kind of work or volunteering, and saying that that's just as important as the money and the social engagement. That would be what I call a robust retirement readiness program.

SAM GUTTERMAN: This categorization is excellent, but it doesn't apply to everyone, particularly those who are disabled. I was trying to think how these three categories would apply to someone who is disabled. It can be considered to be an intermediate condition, but it's difficult for many who are disabled to start healthy living habits, whether lifestyle related or financial. They may find it difficult to obtain or keep jobs, and the more disabled they are, the less likely they will be able to obtain benefits from satisfactory social interrelationships. Do you have any observations about these individuals, as there are many who fall in this category?

STEVE VERNON: By the way, just to give recognition, Sam was on the group that gave advice to this project, so I just wanted to acknowledge Sam and thank you for that participation.

You know what? I don't have a good answer for people who are disabled and trying to meet these metrics. We acknowledge up front that some of these metrics are easier said than done, and that phrase applies more, I think, to disabled individuals than to others. I would posit though that if—for anybody, even if you're disabled—if you can, getting sufficient sleep, healthy BMI, eating fruits and vegetables. The frequent exercise might be tough, but the other three are possible, and so they represent to me—and avoiding smoking. I mean, all of these in some way, shape or form are possible with folks who are disabled, so we're really not trying to distinguish, at least on this first go-around. We just looked at all Americans, and the statistics actually probably included some people who were disabled. That could be another next iteration, so at this point, that's about all I can say on that. But if other people have ideas, particularly Sam, I'd like to hear at some point more ideas on that as well.

CYNTHIA HUTCHINS: I would think, too, that a lot of that really kind of depends on policy changes, so that within our communities, we have better services that can address those needs, because there's a lot of communities—most communities don't address those needs adequately.

ANNA RAPPAPORT: As the advocate of the idea of having a life portfolio, which is apart from your money portfolio,one of the things I want to plug into what Sam said about disability. One of the things you may have within your life portfolio playing tennis and doing some very active things .But you may also have other things that require you to be less physical capable of doing and you want to do. They are not going to go away. And I think being able to do some things you enjoy is a form of insurance. So I encourage people to think about it as a method of risk protection. So if you decline, not all of those things that yoreally care about and are passionate about will become impossible at once. You'd much rather see, if something happens and you decline, that you can still hold onto some of them.

JIM TOOLE: I'd like to add an idea that we're about ready to publish a brief on, [which] is the idea of a social portfolio and the idea that building a social portfolio is just as important as building a financial portfolio. And just like a financial portfolio, it's diversified. You want to have a diversified social portfolio.

We're not the first ones to invent this concept. This is actually in guidance with Sam's question. I don't know if you've heard of Dr. Gene Cohen; he wrote a book several years ago called *The Mature Mind*, and he had this quadrant of—he was advocating a social portfolio as well, and if you can imagine, a quadrant. And there were activities that you do by yourself, like reading; and activities you do in a group, that was one cut at it; and then the other was activities that you can do while you're active and mobile; and activities where you can be less active and less mobile. So, for example, joining a reading club doesn't require you to be super-mobile, but it's a way to get out and talk to people. And he was actually advocating you have this quadrant, and make sure you have a diversified portfolio with individual activities and group activities and then high mobility and low mobility, and be aware that as you get older, you might be transitioning more down to the low-mobility activities. So it's just kind of an organized way of building a social portfolio.

DALE HAGSTROM: I'm Dale Hagstrom from Milliman. I just had a question. Let's suppose I was trying to eliminate the gender distinction in pension or annuity sales pricing by substituting Jim's entity, this emphasis on social networks as making a real difference in mortality. I suspect the degree of social connectivity could substitute for a lot of the female-versus-male difference, and may even have some explanatory power for the case of a widower's higher death rate right after he loses his wife, whereas there may be less effect in other situations. Let's assume one could underwrite individuals for the degree of social connections. I suggest Jim and Steve bring together (a) what the difference in mortality is by being more or less connected with (b) Jim's database on how much more or less connected males versus females are. Would the results suggest that insurers—and any pension plans allowed to reflect gender—could make that substitution to eliminate an assumption that's gender based? If you could work with Steve to test that and publish it, I'd be interested to read it.

JIM TOOLE: I am. I've done a lot of thinking on this and also on data analytics, and basically, anything that you can underrate based on age, sex, race, socioeconomic status, you can figure out from the credit card statements and get around any law that you want. And I know that as the SOA is bringing data analytics onboard, predictive modeling into their curriculum, that the ethics of data analytics are going to be part of that. So as actuaries who have professional standards, we need to be cognizant of the way that we use these powerful tools to do our pricing and modeling. So work for good.

STEVE VERNON: So we're about seven minutes from the time we're supposed to leave, but this is kind of like the last call for questions. Maybe we might want to get to the reception early, but I don't want to cut off anybody from talking.

JOCHEN RUSS: Sorry to hold this up. Jochen Russ, Ulm University. This has been a great session, and I was particularly fascinated by the nonfinancial aspects, but when it comes to the financial aspects, actually there was one thing missing, in my opinion. You talked about saving for retirement. You talked about life insurance in case you die early. But I didn't hear a single word from the panel or from the audience about the financial risk of actually outliving your money. I would guess that about 100 percent of the people have lifelong expenses, and therefore you need a lifelong income, and therefore annuitizing at least the money that you have saved for basic needs in retirement should be in the center of financial retirement planning. Am I awfully wrong, or is it so obvious that you didn't even mention it, or do you have any thoughts on that? Thank you.

CYNTHIA HUTCHINS: I don't think you're wrong about that. I'll just make a comment, and then I'll pass it to my counterpart down on the end. When we think about retirement planning, we really tried to direct the conversation in terms of income planning, so it is a very important aspect of this. I will tell you, though, that just in recent years, the concept of longevity insurance has become much more palpable in the financial services industry, because people are living longer and need to insure beyond a certain point. So longevity insurance is something that kicks in after you hit a certain age, to kind of counter the idea that you're living longer than you had planned to live. So these are products that are becoming more and more available in the marketplace, and they're also becoming more imaginative as we go, so I would say stay tuned.

VEKEVIA JONES: And no, you're spot on; you're absolutely right. I didn't mention that, but it is hugely important. I know most of the time, when I do speak to clients or I have in the past, and they're getting ready to retire, they're often not sure what they're going to do with the account balance that they have. Some think, "Okay, maybe I'm just going to move this over into a checking account or a savings account, or what should I do?" and not understanding the tax ramifications of that. So being able to decide "How much income do you want to replace that you're going to have that's steady from now or for a certain period of time? And then how much of that are you okay with keeping just invested and taking care of that, outside of something that's a more fixed-income annuity option?" Or some people may be in a position where they say, "I feel comfortable that I might have this portion of my annuity, but what if I live past age 80, age 85? Is there an opportunity to have a product that would come into play at that later age in life, where I might actually need extra income?" And they might look at, like, a longevity annuity in that instance.

So, yeah, I think it's about being able to look at the expenses that you have and then how do you want to cover those expenses. Do you feel more comfortable about taking a more conservative approach and going with an annuity option where you can have the specific payments that come out to you, or really where [do] you fall in your comfort level with that? But I think it is a huge piece of it and trying to figure out how you feel most comfortable with getting your income in retirement.

STEVE VERNON: So let me just add one more thought, and then we'll take the next question. Back to the study: We hotly debated do we have some kind of retirement adequacy metric in this study. And there are a number of studies out there already on that, and we kind of decided, "Let's address that later." So we're not saying it's unimportant; it's just we felt that studying that, there's a lot that goes into what percent of the population has an adequate retirement. And that's part of outliving your assets.

What we did do is focus on—there was that measure on what percent of the population at all ages had income above twice the federal poverty level, and so we felt that was a measure of at least having income to support your basic living needs. And that was as close as we got to that risk of outliving your assets, because we did see that once income started falling below that level—and the farther below that level, the farther it fell—that was a risk, and so for the moment, we focused on cash flow. And maybe in future iterations, we might dig into that on the retirement adequacy.

CYNTHIA HUTCHINS: And just one more comment on that point: I would also—the idea of lifetime income—so an annuity has become more and more important as employers in the private sector move further and further away from defined-benefit plans. And so—at least in the U.S.; I can't really comment on other countries—but in the U.S., the three-legged stool has kind of been kicked out from underneath everyone, and so I think if we're going to look at it statistically, it might not be a bad idea to really examine that in terms of private sector versus public sector and how people are faring as they try to set up these guaranteed income streams over the course of 20, 30 or 40 years.

STEVE VERNON: We've got time for one more question.

MAGALI BARBIERI: Actually I have two, if that's okay. So my name is Magali Barbieri.

STEVE VERNON: Ask them both.

MAGALI BARBIERI: I have a short question and a long question. The short question is, Do you feel that after the crisis at the end of the 2000s, people have less trust in [the] retirement system and retirement saving organizations, which could maybe explain some of your findings? And my second question is that you've listed in this project, you've tried to identify what makes a healthy aging, and a lot of these are, it seems to me, common sense. People know that they should smoke less and lose weight and exercise more. So I'm wondering if you've planned to also look at what are the constraints that people face to meet this healthier behavior. Is that part of your project, and how are you planning to measure those? Thank you.

STEVE VERNON: On the first one about trust in financial institutions, any thoughts on that?

CYNTHIA HUTCHINS: Yes, I'll comment on that, definitely. I think that there is diminished trust in financial institutions, but I think in particular, it's with millennials, because the millennials watched their parents go through stress and fear and the possibility that they may not be able to retire. Many people were walking around saying, “I’ve run the numbers, and I’m never going to be able to retire.” And the millennials are watching their parents go through this, so as they start to make their financial decisions in their own financial world, they’re saying, “I’m just not comfortable taking any level of risk,” and that’s a problem, because it’s just as risky not to take risk as it is to take too much risk in terms of the end of the game, right? So, yeah, I think there’s definitely a trust issue.

VEKEVIA JONES: And I think if, during times when the market is down and people feel that they’ve reached out to their financial advisers and tried to see exactly how should they be invested, a lot of people found that they were invested a lot more aggressively than they really should have been, something that they’re comfortable with. So I think a lot of the distrust is also coming from perhaps working with someone who didn’t truly understand how that person wanted to be invested.

STEVE VERNON: Well, thanks for your answers on that, and I wanted to address your second question, [which] was, I think, if I understood it, it was addressing the barriers that people might have to taking the action steps. And that was one of the goals of the study, was to identify which groups are doing well and which groups aren’t. And if I just had to generalize, coming out from the study, it was real clear there’s a vulnerable group—lower income, lower education. Those are the folks that are smoking more; they aren’t getting the diet we need; they’re not sleeping as well. So what that helps us do—that’s the first step: what messaging or what programs or interventions could help that group. We’re not too worried about, I mean, the top income quartile, people who have college degrees. We saw the data there, and I’m just not too worried about them. They’re doing okay.

So we are really interested in taking this to the next step really, and starting to target interventions where interventions are needed. So if anybody has any thoughts on that, I think motivation engagement is one of the focuses that we should have.

So I think we’re a couple of minutes over. I’d like to just wrap up. Thanks so much for your participation. I want to ask a question, though: At Stanford, when we were looking at the different types of exercise, we did identify a couple of different exercises that might improve your health and longevity, and I could share one if there's interest. Is there any interest in that?

STEVE VERNON: Let's all stand up. This is an exercise we pilot tested, and this works pretty good, and we're pilot testing it, and we want to go on to broader groups and do research, so this might improve your health and longevity.

[*Singing*] You put your left foot in; you put your left foot out. You put your left foot in, and you shake it all about. You do the hokey pokey, and you turn yourself around. That's what it's all about. [*Applause*]

Thank you. We'll see you at the reception.