STANFORD CENTER ON LONGEVITY

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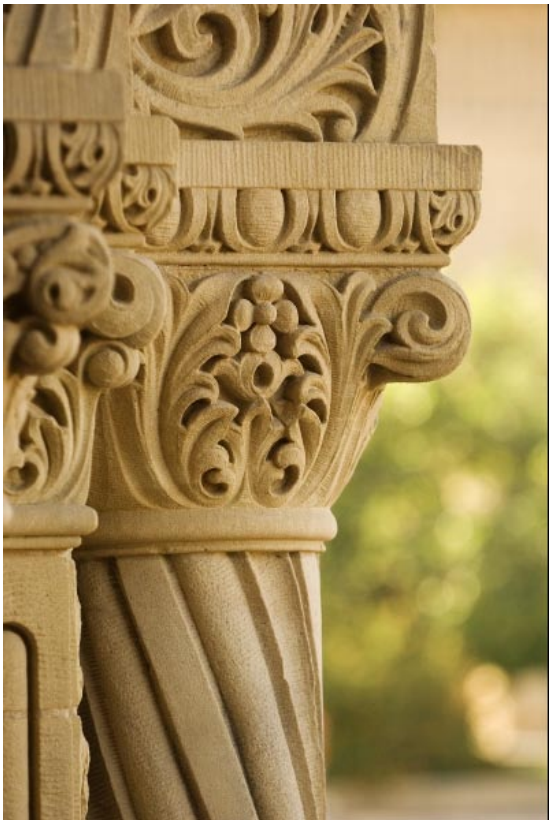
MISSION

STANFORD CENTER ON LONGEVITY

Established in 2006 by Stanford professors, led by psychologist Laura Carstensen and neurologist Thomas Rando, the Center is the only organization of its kind. We link top scholars with government, business and the media, and we take a comprehensive approach to longevity. Our mission goes far beyond research. Our ultimate goal is to transform the culture of aging.



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DIRECTOR'S NOTE

More people are living longer than ever before in human history, and the implications of an older America are coming to bear quickly. This brings challenges and opportunities. Either way, our society must be ready.

Preparations are overdue.

Many people don't realize that aging is not just about older people. Aging is about the 35-year-old whose financial planning today can mean financial security at age 80. It's about the 50-year-old with kids in college and parents who live far away but can no longer stay by themselves. It's about the 65-year-old who has to keep working, even though she would like to slow down, because pension programs that served her parents will be insufficient, maybe even insolvent.

There's no single problem, no single solution. In fact, many people have yet to begin asking the right questions.

We created the Stanford Center on Longevity not just to ask those questions and identify the most important challenges, but also to bring together experts who understand the facts, can create solutions and help our culture adapt.

Research is our most potent tool.

The Center's work on health care is an example of our approach. The issue is complex, multi-faceted and touches every American at every stage of life. Our Health Security Project brought together experts whose findings foreshadowed some of the communications hurdles that nearly derailed health reform legislation. We are building on that project in 2010 as our nation's attention turns – or should turn – to Medicare's looming insolvency. As a special feature for this annual report, we asked center faculty affiliates for their perspectives on the prospects for resolving Medicare's finances. Throughout the year, we will be calling on them and other Center affiliates to help our nation's leaders make the best, most informed decisions.

Longevity and the Center's work go beyond health care. We seek innovative solutions to the problems of people over 50 and we strive to improve life for people of all ages – in areas ranging from health care to housing, mobility to financial security.

At Stanford and in Silicon Valley, people have identified opportunities and created solutions that have changed the world. Likewise, helping society prepare for the unprecedented challenges of aging and the great value older people contribute to society requires vision and uncommon approaches.

We can't change the culture overnight and we can't do it alone. But we must act soon – thoughtfully and quickly.

Laura Carstensen PhD
Founding director, Stanford Center on Longevity

STRENGTHENING MEDICARE

The Stanford Center on Longevity brings together scholars and researchers to prepare the globe for a rapidly aging population. During the recent congressional debate on health care reform, we called on six of our faculty affiliates for their perspectives on the looming challenge posed by Medicare's insolvency by 2017. Their responses have been condensed and edited.

The faculty affiliates consulted for these questions are:

David Brady MA, PhD, professor of political science

Laura Carstensen PhD, professor of psychology and founding director of the Center on Longevity

Alan Garber MD, PhD, professor of medicine/economics/health and research policy, and director of the Center for Health Policy/ Center for Primary Care and Outcomes Research.

Daniel Kessler JD, PhD, professor in management/ law/ health research and policy,

Lee Ross PhD, professor of psychology

John Shoven PhD, professor of economics and director of the Stanford Institute for Economic Policy Research.

THIS IS THE HEADLINE FOR THIS SECTION

What lessons should lawmakers have learned from health reform that will be helpful in addressing Medicare?

David Brady: First of all, that it's not easy to make reforms that affect large parts of the economy, that campaigning is different from governing and that expectations can be too high. When the Obama Administration came in, it was generally assumed we'd get health care reform. Why has it been so hard?

Because, A, the status quo on health care is that a lot of people are happy with their health care. So when you're going to change anything that's that big and there's a status quo that's reasonably satisfied, it's hard to do, and, B, the most important lesson from Medicare is that legislators are worried in general about elections, which are two years off, not the future. So short-term concerns, electoral concerns, dominate legislatures' ability to plan in the long run.

Let me just say, for Medicare, it's exceedingly important because I am actually quite pessimistic about the chances for Medicare reform.

Health care reform is about, in some sense, getting more people covered, but it's also about cutting costs. When people are satisfied, it's hard to get 'small d' democratic representatives to change their views.

People expect Medicare to pay for everything. Medicare Parts A and B do essentially pay for everything for people over 65. Iin the long run, as the population ages,you have to be able to hold costs down,and I don't see either party in the United States Congress being willing to step up to the plate and talk about cutting costs.

Laura Carstensen: How we frame the debate is crucial. We can't talk just about looming financial problems, but instead must understand and convince voters that health policy will continue to be inextricably linked to how well we age as a nation. As we address the challenges of Medicare solvency, we must summon up the courage, ideals and creativity that have inspired us and driven positive change.

In revamping Medicare, policymakers should not just fix the looming financial problems. Doing that is essential, of course, but our nation also needs to structure a new system that truly encourages long, healthy and productive lives.

Let's think ahead to questions about long-term sustainability, and let's get Americans to have straightforward, serious discussions both about what they want from their social insurance systems and about the tradeoffs. I would like to see a systematic evaluation of new medical procedures and technologies, along with open debates about their cost-effectiveness and desirability. Members of all generations – not just those on the verge of retirement today – need to talk honestly about how they envision their retirement and health needs as they age, but also talk honestly about what they are willing to do today to make sure those needs can be met later.

"So how do you make the connection between that and how do you get politicians to deal with the issues. I don't know if that's possible, but I do know it's an area where, seems to me, psychology and the sorts of stuff the Center does would be very useful."

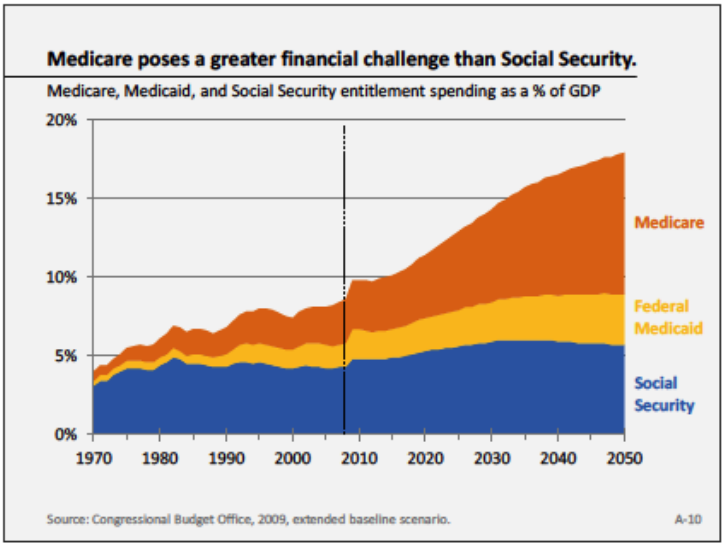
- David Brady

STRENGTHENING MEDICARE

Alan Garber: That it's going to be very difficult to gain public support for painful changes unless the public has a full understanding of the risks of inaction, the consequences of inaction.

Lee Ross: The importance of framing, with emphasis on what people and those they care about stand to lose by not enacting legislation, rather than what they and others stand to gain by passing it. They should decide earlier on strategy – whether to court or bash, coerce, embarrass opponents – and then carry through. Some good focus group work on how to pitch to the GOP populace could help to make it safer for GOP legislators to side against their party. Obama must be willing, if need be, to demonize those on the other side of the issue, something he is loath and perhaps temperamentally unsuited to do. I won't even go into what LBJ would have done to get the necessary votes in similar situations, but it wouldn't have been pretty.

The very thing that was a disadvantage during the health care debate swings to become an advantage in Medicare. That is, people say: "I'm reasonably satisfied with the status quo. I know it isn't serving some other people well, but right now, at least, things aren't particularly bad for me." Now, there were many opportunities missed for how to make it relevant to people. There should have been much, much more emphasis not on insuring the uninsured per se, but rather on what you can do to make the issue relevant to people who were already insured.



The reality of it is that most Americans are satisfied with their coverage and with good reason. People are generally happy with the Medicare system. We all know the joke about people saying, "Don't let the federal government get their hands on my Medicare." Therefore the burden of proof will be on anyone who threatens the status quo in any way, even someone who makes rational arguments. In terms of human psychology, people are extremely loss- and risk-averse.

Therefore the burden of proof will be on anyone who threatens the status quo in any way, even someone who makes rational arguments: "Gee, we're not getting as good a deal on Medicare as we should. It would be better if we cut taxes and put more money in people's pockets and gave them more options." In terms of human psychology, they're going into the domain of losses, and people are extremely loss- and risk-averse.

John Shoven: Cost containment – cost control – is probably the number one issue. To me, there are two key matters. One is coverage, and the other is cost control. For the Medicare population, coverage is not much of an issue. So I think the predominant issue is how to so-called bend the cost curve. Another important aspect is what you might call coordinated care. There are lots of stories – and my guess is they amount to reality – that people are being over treated in some cases, that no one is coordinating their care, they are on 20 different prescriptions, and nobody's really checked all the interactions and so forth. So I think one problem with the current Medicare system is it doesn't really foster coordinated care.

The other thing I would mention is MedPAC [Medicare Payment Advisory Commission]. Their ideas have to be implemented by Congress. They have to be put into a bill and passed. But Congress gets distracted, so their ideas often essentially fall on deaf ears. Reform that I think would be interesting would be to have a stronger MedPAC. Give Congress maybe six months in which to overrule MedPAC, but if they don't overrule it, then MedPAC's recommendation becomes effective.

Inertia would be on the side of going with MedPAC because Congress would affirmatively have to say, "I know the experts recommend this, but we don't think so." That would get some of the politics out of and give MedPAC more authority – similar to what the Federal Reserve has – and more independence from Congress. In the next year at SIEPR, we're going to have a series of conferences, one in particular on health care, and MedPAC is one of the tough topics.

"We need to change the conversation. Right now, it's about coping with the growing numbers of older Americans and fewer workers coming behind them, but it should be about opportunity. Added life expectancy is a gift. How are we going to use it?"

- Laura Carstensen

REPORT:

Putting the Public's Money Where its Mouth is

In a paper published by the journal **Health Affairs**, Stanford Center on Longevity faculty affiliates Daniel Kessler and David Brady described the results of a 2009 national survey that quantifies Americans' willingness to pay to expand health insurance coverage. In the survey, which received a seed grant from the Center, they asked respondents whether they would support a Medicaid expansion, a subsidy for low-income people or a subsidy for the chronically ill, if they had to pay more income taxes to cover the program's costs. The results reflect a tension in public opinion recognized by previous investigators: a desire for reform but limited willingness to pay for it. (August 2009)

Does the experience of health reform in 2009-2010 make it easier or harder to fix Medicare's financing challenges? Why?

Alan Garber: Harder near term, potentially. Near term, the health reform experiences will be a deterrent because the politically unpopular aspects of the health reform plans have been incredibly difficult, have been difficult to legislate. And the Medicare fixes will involve some aspects that will be difficult for key players to accept, such as Medicare beneficiaries themselves or health care providers or others who are responsible, whose costs are driving up total Medicare expenditures or tax payers, third group. In fact, it is likely that any solution for Medicare's financial problems will involve multiple approaches. Long term, failure to develop general health reform may place greater pressure for more dramatic forms of change.

Think about an earthquake, a bunch of small temblors actually. They blow off pressure and lower the likelihood of a really big earthquake. So if you don't do the small pressure releases, it could be that much more disruptive change will come.

John Shoven: It probably makes it harder. It can't be very encouraging that we couldn't get any bipartisanship on health care reform, and it's hard to see how we're going to get it on Medicare reform. Medicare is not really on a budget now. Part A is. Part A is hospital insurance and has to live within the payroll tax that finances Part A. Part B is financed by general revenues and by participants' monthly premiums. But that general revenue is like an open checkbook, and it would be better to have a dedicated tax source and only so much revenue to spend. Part D – the pharmaceutical drug benefit if you like to call it that – to the extent the government contributes, it's out of general revenues, which is the open pocketbook.

One proposal I have advocated with Vic Fuchs is that all health spending, including Medicare, be funded by a dedicated tax. A dedicated tax might be a value added tax, but there would only be so much money to fund Medicare health care. Not that the tax couldn't be raised, but it's difficult to raise taxes in this country. So that would cause more examination of how we can control costs, whereas now if you have a general revenue claim, you just spend more, it just costs more and someday those bills will be dealt with.

You might reflect on Part D. It was a valuable new benefit. You might ask yourself, well, what tax was raised to pay for that valuable new benefit? The answer is, no tax was raised, and so a normally intelligent person could conclude Medicare Part D was free. No tax goes up, and you get a new benefit. It sounds like it's free.

You would've had a very different discussion if it was: This is a valuable new benefit, and it's worth this new tax or this tax we're going to raise in order to pay for it. Then the debate would've been: Are the new benefits, even the political benefits, worth the political cost of raising a tax? But that's a benefit-cost discussion. That's exactly what should've happened. What I'm saying is, if you had a dedicated tax financing health care or financing even Medicare – I would go health care more broadly – at least then you could have a debate about, gee, can we let this tax go up and up or should we figure out how to contain costs right now? It's easy to just let costs go up and up, and the general revenue financing makes it feel that way.

Lee Ross: I presume harder because of the political developments, to say nothing of the loss of the Massachusetts Senate seat. But note that with Medicare, the status quo bias and loss aversion help the Democrats rather than the GOP. The GOP can be on the opposing side with impunity. There aren't many vulnerable Republicans, there aren't many conservative Republicans in liberal states, and, just by monumental bad luck in Massachusetts the Democrats had a moronic candidate and a situation where people had state health insurance. They didn't even have any skin in the game. It's easier to alarm and motivate people to defend the status quo than it is to inspire them to change the status quo.

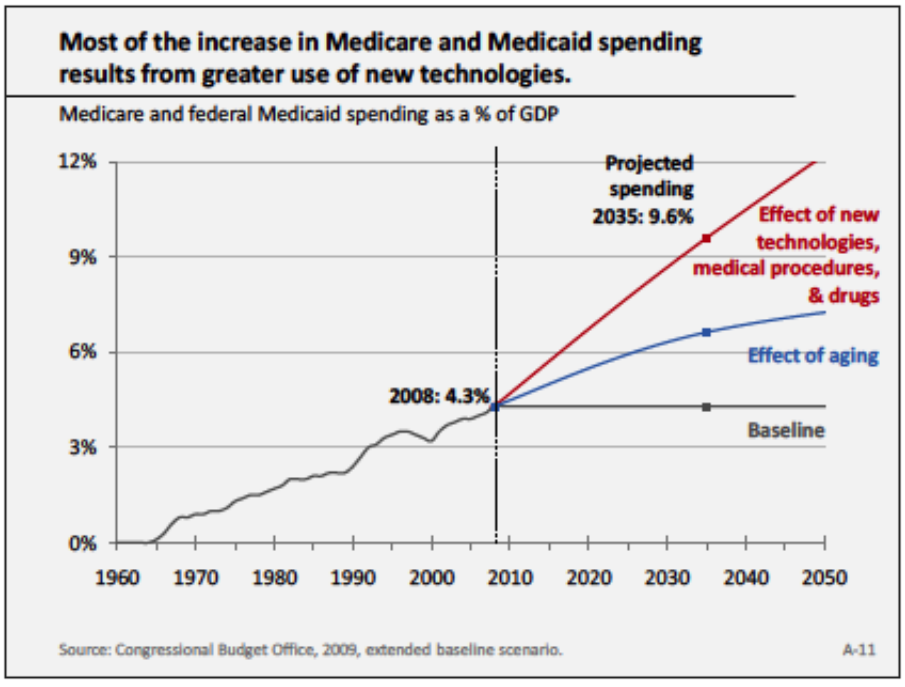
"It's going to be very difficult to gain public support for painful changes unless the public has a full understanding of the risks of inaction, the consequences of inaction."

- Alan Garber

STRENGTHENING MEDICARE

David Brady: On the budget, in my view, they pretend that they meet the requirements for "pay-go." The actual legislation says over the time of the budget, costs of health care will not rise more than $1 billion, which is nothing in terms of the health care budget. So they backload. The real expenses don't start until 2013, 2014, and they make assumptions that they will cut Medicare payments to hospitals and doctors. But they don't cut them. They say they're going to cut them, and then what happens is, they pass. They can't do it. People expect their Medicare. So they don't cut Medicare. So I don't think anyone believes there is $400 billion of savings by virtue of saying they're going to cut Medicare payments. If they can't meet the requirements in the moment, why would they be able to do in the long run? Medicare is in some ways tougher. Everybody over 65 gets it, they all vote, they're all interested in politics, they're all well organized into groups.

By the way, this is not just a problem for the United States. It's a problem for all democracies – the Japanese, the Italians, the Spanish, the Europeans, everybody – every democracy. If you were able to get a picture of the unfunded liabilities, which is health care payments to senior citizens and to state employees, as well as pensions, all of those things. Not a single country has a fund to do that. In general, they all come out of general funds, and they go year to year. As you now reverse the situation, much more in those countries than in the U.S., the work force diminishes, you invert the pyramid. They're all in trouble, but none of them have been able to take much action meet the promises it has made to its citizens, the unfunded liabilities.



Social Security is a much easier problem to fix. George Shultz and John Shoven have a good book on this. You simply extend the working age, etc., you index payments to wages as opposed to the Consumer Price Index, and that alone extends Social Security for 50 years. But they can't do that. Think of how much tougher it is to cut costs in health care.

Laura Carstensen: Probably harder, at least in the short term. But I hope that our leaders and the American people have learned some lessons that will be valuable as we consider the future of Medicare.

It's tempting to think of Medicare and Social Security as stalwart programs that have existed forever. But in historical terms they're practically freshly minted. Social Security was launched less than a century ago, in 1935, and the Rolling Stones recorded "Time is on My Side" the year before Lyndon Johnson signed Medicare into law and gave Harry Truman the very first Medicare card in 1965. As a result, these institutions don't have much experience adapting to complex demographic changes like the ballooning of life expectancy. As the baby boomer generation begins to retire, there will be a considerable strain on these systems, and a number of important issues to work out.

Without asking you to predict what will happen, what is the likelihood that Congress will enact legislation before the November 2010 elections to fix Medicare?

John Shoven: Zero.

Lee Ross: I would put it as a barriers question: What are the major impediments or barriers that would prevent Congress from enacting legislation? What stands in the way? It may be that people have not been made aware of the risk. It may be the debate has been carried on in too rational and high-flown a manner. It almost certainly is that individual GOP guys have paid no price and fear paying no price in a context where any achievement by Obama is a loss for the GOP and any loss by Obama is a victory for the GOP.

"The problem is not lack of technical expertise or ideas, but simply a failure of political will by both parties."

- Daniel Kessler

STRENGTHENING MEDICARE

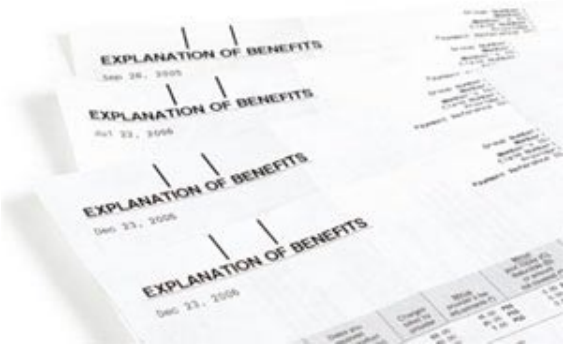
REPORT:

New Findings about Voter Attitudes on Health Care Reform

The Center facilitates dialogue between politics, academia and the public – worlds that don't often interact or work together toward finding solutions. Health care, an issue that touches every American at every stage of life, was the focus of the **Building Sensible Health Care Solutions project**.

In early 2009 as Congress prepared to consider health reform, a Center survey showed older Americans to be particularly outspoken about proposed reforms and quite vocal in their concerns for Medicare. The results, which revealed strong partisan divides and warned of a bias for the status quo and reluctance for reform, supplemented the national conversation with information and ideas that were fact-based, politically viable and publicly supported. The Center's approach can serve as the basis for ongoing conversation, collaboration and consensus building by policymakers at all levels. (May 2009)

I can't recall ever seeing as cynical a fight as the fight over health care reform. The Democrats challenged them on their philosophy instead of personally vilifying them. Now, one of the reasons Democrats haven't been able to do this is they are almost as much beholden to special interests as the Republicans. What does this lesson tell us? It tells us something about framing and something about politics, predicting what happens. If you think of the status quo as a contest between the things that are forcing the president in this direction and forcing him in that direction, conceptually an incentive or a threat pushes harder. When you push harder, you get pushback and you get a lot of tension in the system – "do this or else," "do this and I'll give you this."



The alternative way is to see if I can remove the push. People say, "We've always done it that way, we're not going to change" or "This is what people like me believe." If that's the barrier, saying "but I'll pay you $50" is a bad way to overcome it. A better way is to say, "No, actually, most of your neighbors agree. Let me show you what specifically you can say to anyone who disagrees."

Laura Carstensen: Very unlikely. Medicare is much harder to fix. Our Social Security obligations can be satisfied through relatively minor changes to the benefits schedule and by providing incentives for longer work force participation, and even that would be politically painful. But Medicare will require resolving some much larger problems inherent in our health care system itself. Just tweaking the tax code or benefits rules won't solve the problem, and you can't ask people to delay medical care the way you can ask them to delay full retirement.

Alan Garber: I would be very surprised if major legislation is passed. But minor changes could occur before November 2010 – for example, legislation that might enhance the abilities of the secretary of Health and Human Services to authorize pilot projects.

David Brady: Zero.

What kinds of messages and information should be conveyed to older Americans to help them understand the importance of taking action and to garner their support for proposals?

Laura Carstensen: Medicare – like Social Security – has changed the quality of life for millions of these older Americans. But today we are moving into a historically unprecedented era of long life. These institutions need adjustments, but because they are so valuable, the prospect of changing them makes Americans nervous.

In a nationwide survey the Center on Longevity conducted in the spring of 2009, we found that when the issues and tradeoffs are clearly articulated, the voting public understands them and raises legitimate concerns. That tells me that we need to talk seriously with older Americans about what's at stake – both the existing problems and solutions to those problems – for individuals and for the system more broadly.

People over the age of 65 are the most mentally stable and optimistic adults. They have the lowest rates of depression. Older people focus more on positive images and messages in everyday life than younger people, they resolve interpersonal problems more effectively, and they regulate their emotions better than any other age group. They can handle the truth, but that means we must provide straight talk, not generalities.

"It's easier to alarm and motivate people to defend the status quo than it is to inspire them to change the status quo."

- Lee Ross

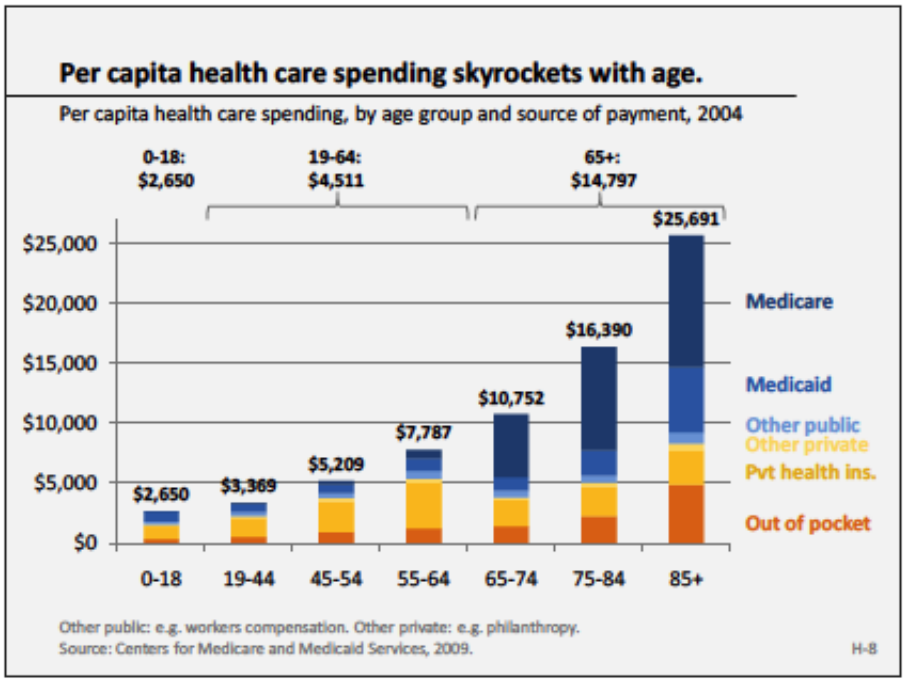
STRENGTHENING MEDICARE

Let's be clear: If we hold on too tightly and refuse to change, in less than 20 years Medicare and Social Security together will consume more of the federal budget than all other federal programs combined. The programs could place so much strain on the federal budget that we would have less funding available to pursue other endeavors like reducing pollution and improving our schools and highways. Many argue that the measure of a society is the way that it supports its elderly citizens, but without changes to our current system we are headed toward a culture with great inequities.

John Shoven: Current voters need to think about what kind of economy they're leaving to today's young adults and people even younger than that. Let's take current college students or people 20 years old or so. What are we leaving them? We're leaving them a mess, and we're on a path where we're going to spend 30 percent of our GDP on health, we're going to spend 15 percent or so on Medicare or Medicaid. By and large those costs, particularly the Medicare and Medicaid costs, are going to borne by workers in supporting older people.

So I think the message is: We shouldn't do this to our kids and grandkids. I actually believe that we could have a pretty good health care system if we said: "We're not going to allow it to cost 30 percent of GDP; we're only going to spend 20 percent of GDP." That's what you would do if you were on a budget. Now you'd give something up. In every other aspect of life, we do the best we can with the money we have available. That's how we deal with our housing, that's how we deal with our food, that's how we deal with pretty important stuff. That's not how we deal with health care – we say whatever you need, whatever it costs, we will provide it. I think that's a huge part of the runaway costs. There's no budget.

There are estimates that somewhere between 30 and 40 percent of all health care spending is low value, might be called waste. The trick to figure out how to get that out of there. It's not easy. But there is a lot of low-value spending. That should give us some hope and a target that we could get off this path and still have a quality health care system.



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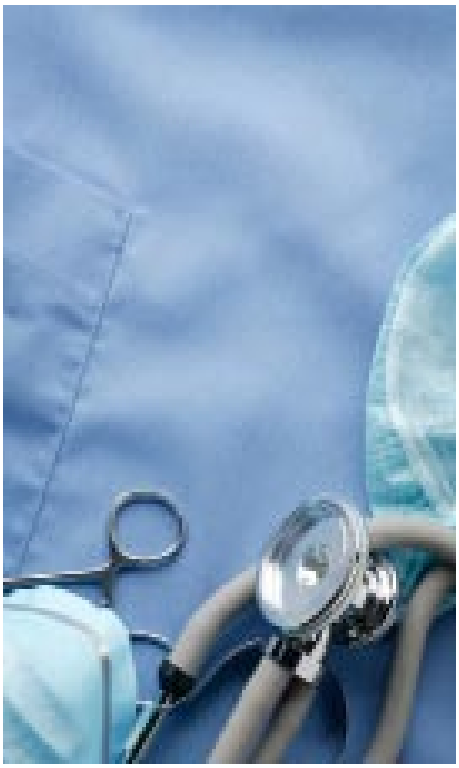
David Brady: The main message is you're going to have to get by with less. But who's willing to put that message out? When I listen to the Republicans' criticism of the Democrats' bill, it's always, "Oh my god, you're going to limit Medicare payments." Well of course. The message is how to get people to get their act together to be responsible for their own lives and responsible for managing health care. At this point, what do they have to manage? It's just all taken care of, and that works okay because of a lot of young guys paying for old guys. But the old guys are gaining ground. , and California may just be a harbinger of that.

I haven't heard any politicians come through and say we're going to have to get by with less. In fact, Congress and parliaments all around the world are all willing to set standards for air quality, water quality and sustainability 50 years in the future, but they won't do it at 20. There's a reason for that. In 20 years, some of them might still be there. In 50, nobody will. Sound cynical? A little bit, just realistic.



Lee Ross: Pay attention to the lesson of "channel factors" and perceived norms re actions and beliefs, rather than persuasion. I doubt that convincing older Americans to be concerned is the problem – certainly not once they are made aware of the threat and its imminence. Also, gain support of the boomers by connecting the issue to their concerns and financial self-interest, as well, about their aging parents and the fear of huge non-covered medical costs that they personally will pay – if not directly, then indirectly.

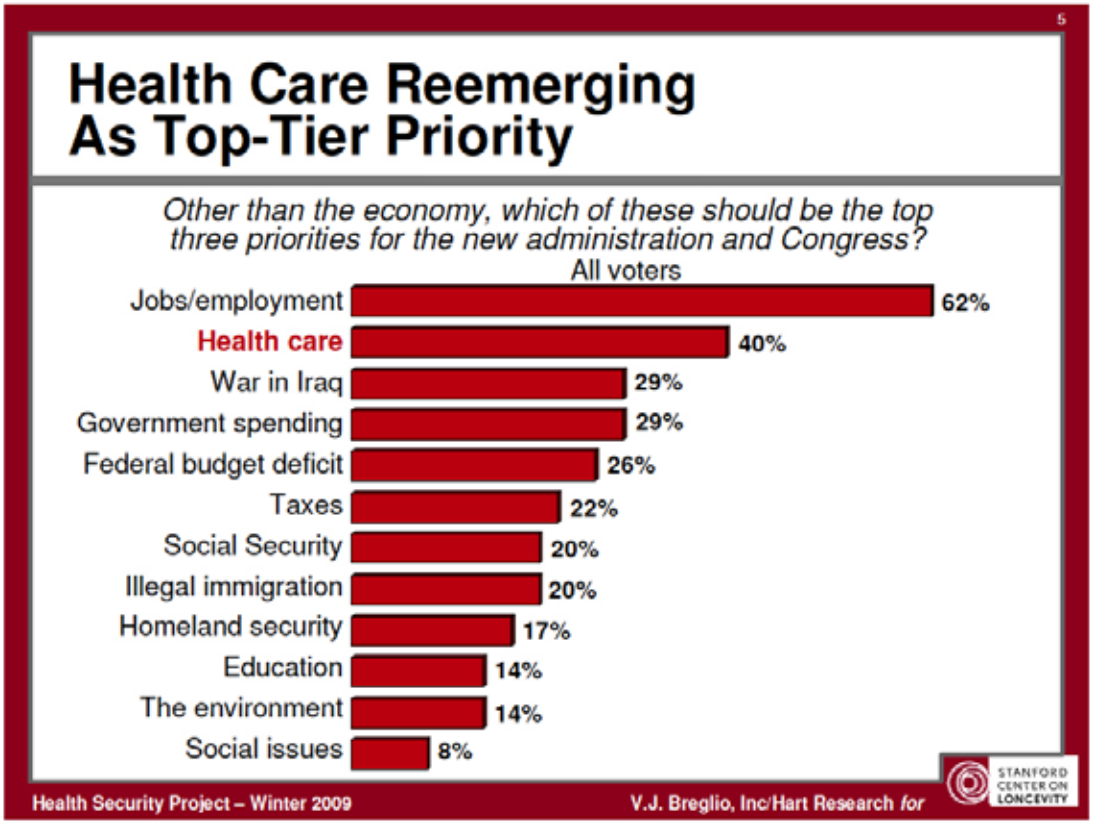
"Current voters need to think about what kind of economy they're leaving to today's young adults and people even younger than that. Let's take current college students or people 20 years old or so. What are we leaving them? We're leaving them a mess."

- John Shoven, PhD

The idea that we should mobilize older Americans – that's certainly true and very doable. But I think we often underestimate the importance of family, meaning you can motivate people to do things that aren't in their self-interest if they recognize it's in the self-interest of their kids. So Medicare should very much is directed in the sense of: "Your children are at risk. By not supporting this policy, you are taking the chance that your children will be uninsured. You know, you're not going to be around forever. Your child might be one skiing accident away from having everything your family has accumulated disappear."

Channel factors refers to the path or the stream by which attitudes and intentions get translated into action. In essence, it involves saying: Make it easy for the person to do what you want them to do, create a moment in which a yes-no decision accomplishes it and, ideally, make the default option be yes rather than no. In the best of all possible worlds, it should involve creating a request to every elderly American, certainly every elderly American who uses the Internet, which says, "If you would like to send a message, click this or sign this." Create a single vehicle and, ideally, a single time or a single time period in which to do something.

The second thing I would do is manipulate perceived social consensus and have them feel that "millions of people like you have already done their share or are doing it." I would say: "We expect older people to rise up and protest this in numbers that have never been seen in American history." I would say: "Elderly Americans are angry in a way they've never been before. Elderly Americans think it is a disgrace that the generation that fought World War II and went through the Depression now has to be burdened in old age by fears that a right-wing coup is going to take away their Medicare."



The message is not just: "Watch out, they're after your Medicare." I would have the message be: "They're after your Medicare, and people like you are as angry as hell and they're rising up in unprecedented numbers to protest."

How much confidence do you have that the right people will be heard as lawmakers consider changes to the Medicare program?

Daniel Kessler: There is considerable study about how to reform Medicare, much of it provided by the excellent and nonpartisan Medicare Payment Advisory Commission. MedPAC is an independent Congressional agency established by the Balanced Budget Act of 1997 to advise the U.S. Congress on issues affecting the Medicare program. The problem is not lack of technical expertise or ideas, but simply a failure of political will by both parties.

Laura Carstensen: Policymakers need to listen, but people who want the problem dealt with responsibly must speak up. We need to be honest with each other about what's at stake. Both Medicare and Social Security are facing some serious financial troubles, Medicare much more so than Social Security. Whether it's health care reform in general or Medicare more specifically, we have all heard the charged debates about solutions, just about every day, in our newspapers, in blogs, on television and discussions with friends and family – everywhere.

Inevitably these debates are framed in monetary terms. They focus on what our aging nation can afford and what it cannot afford. When the questions are about strained budgets, the answers mostly address reducing costs. Yet the ways we think about work and health should extend far beyond budgets. They should involve thoughtful considerations of how the economic tradeoffs associated with reforms would mesh with our national and personal values.

Change needs to occur and older people must be involved. But we need pervasive changes in societal norms that span generations, and we need public policies that support these changes. If there is one generation with the power and energy to lead society through a transition to long life, it's the boomers. Little did we know, back in the '60s and '70s, that demands on health care entitlements and Social Security would be our enduring mark on society. Today, it is our responsibility to make sure these programs are changed so that they can continue to make life better for a long time – and our responsibility to make sure the nation's leaders hear and heed the message that we need to change course.

Alan Garber: I'm sure that many voices will be heard. The question is: Which recommendations will prevail? And this is a question of politics that people much closer to Washington could undoubtedly answer with more authority than I can.

John Shoven: Moderate confidence. I thought the Obama idea of a bipartisan commission to make recommendations about the long-run budget situation in the country was probably the right thing to do. It's all about entitlements, first and foremost, it's about health and Medicare and Medicaid. I was disappointed Congress didn't support him on that, but ultimately I think that's the kind of thing that's going to happen.

We should have a commission similar to the commission we had for Social Security in 1983 which was chaired by Alan Greenspan. President Reagan and Tip O'Neill jointly crafted that commission that really saved Social Security in the 1980s. It may be needing saving again, but it has worked reasonably well for the last 25 years. It wouldn't have without that commission.

It was a bipartisan effort. The recommendations of that commission were accepted without much in the way of modification. We need that again. We need it in health care. We need it in Social Security, but health care is the big dog. The order of magnitude is bigger

I don't think Congress can do it without help from some kind of a bipartisan commission. On that Social Security commission, there were figures we still remember. Bob Dole was involved. He basically said, if you oppose this plan, you'd better have a plan of your own. In other words, doing nothing is not an option, and basically that plan passed.

Now of course in that case, Social Security checks were going to bounce pretty soon. The system was definitely in urgent need of saving. We're not quite in that situation now, but we are headed toward what I think is a near catastrophe.

David Brady: In the United States, everybody will be heard. But the process is selectively dominated by wing nuts. It's likely to be dominated by bloggers and no real analysis, and you won't learn very much about what's really at issue. It'll be there. But in the cacophony of noise that comes down, it seems that more and more of the wing nuts are being heard.

I've often thought the way the research should go is: framing, talking, getting groups of old people. First of all, can you get a group of old people to sit down and understand what the issues are? Generally it strikes me when you talk to people, they understand it. When it turns personal, they don't.

Psychology is great at determining how you can phrase things so people understand. I think that's the most important part of the research. How do we ensure people are seriously thinking about the issue? How do we ensure they are getting the facts they need? If you ask me, the American public makes more sense than the professional economists and everybody. The public, as opposed to the politicians, are saying, we're spending too much money, we personally are facing cutbacks in our lives. If you look at the behavior of American consumers, it's better than the government. They understand the notion of cutback. They've got a certain financial reality out there, right? So it's possible.

ABOUT THE CENTER

The Stanford Center on Longevity is working to transform the culture of human aging. The Center studies the nature and development of the entire human life span, looking for innovative ways to use science and technology to solve the problems of people over 50 and improve the well-being of people of all ages.

Meeting these challenges includes changing our health-care system, our entitlement programs, and our personal behaviors and lifestyles. Transforming our culture means learning to appreciate the unique challenges of aging, as well as the great value older people contribute to a society.

The Center aims to use increased life expectancy to bring about profound advances in the quality of life from early childhood to old age. To inspire change of this scale, the Center brings together the best minds in academia, business and government to target the most important challenges and solutions for older populations.

The Center works to make sure that research findings do not stay locked away in academia, but reach policymakers, business leaders, health care planners and others who can use them to improve our society.

Projects are designed to provide information to policymakers and business leaders, and bring them together with the research community. By fostering dialogue among these typically disconnected worlds, the Center aims to develop workable solutions to urgent issues confronting America as our population ages.

DIVISIONS AND PROGRAMS

DIVISIONS

Mobility

The Mobility division brings together experts who promote lifelong mobility by preventing or reducing barriers to physical movement. The Center places special emphasis on the promotion, development and translation of Stanford expertise and of technologies (such as devices, drugs, biologics and behavior) that encourage or restore physical movement.

Mind

The prospect of mental decline associated with aging threatens the well-being of individuals and families. Research by the Mind division on early detection of decline, behavioral and biological interventions, and decision aids is aimed at improving cognitive functioning across the life span. The division also offers the public state-of-the-art information about normal and abnormal aging, along with consensus reviews from the world's experts about potential remedies.

Financial Security

Across the same years that life expectancy has increased, individual savings rates in the United States have decreased. The Financial Security division supports research on products, technologies, fraud and financial education that will help people better plan, save for their futures and guard against financial fraud.

PROGRAMS

Politics, Scholars and the Public

The Politics, Scholars and Public program aims to inform policy decisions that impact longevity and presumes that an informed public makes reasonable and equitable decisions. This program brings together political experts, scholars and voters in a search for sensible solutions to current societal challenges. The program's first initiative focused on health care issues facing the United States.

Global Aging

The Global Aging program focuses on the economic and political implications of shifts in population aging in almost every country as people live longer and have fewer children. Large variations in the timing and pace of fertility declines and longevity gains create dramatic differences across countries. Understanding these developments and trends is critical for addressing them wisely. Global Aging stimulates public discourse on the challenges and opportunities associated with population aging.

LEADING THE DISCUSSION

Conferences and other meetings on and off campus frequently call on Center experts to discuss research on longevity issues. Center staff briefed government officials, researchers and reporters on topics ranging from the challenges of health care reform to global aging.

Some highlights:

LAURA CARSTENSEN:

• Discussed demographic shifts at **the Summit on the Global Agenda** at the **World Economic Forum in Dubai**. (November 2008)

• Presented on **"Long Life in the 21st Century"** at **Leading Matters San Francisco**, a gathering of 1,600 Stanford alumni, family and friends. (May 2009)

• WasPlenary speaker and made a presentation on **"A Long Bright Future: Aging in the 21st Century"** at the **American Psychological Association** annual convention in Toronto. (August 2009)

• Presented social psychology keynote address on **"The Influence of Shifting Time Horizons on Human Aging"** at the **Association for Applied Sport Psychology** annual conference in St Louis. (September 2008)

Laura L. Carstensen, PhD

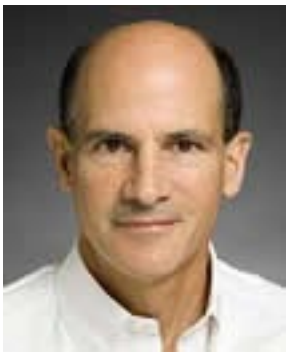
Director

Laura Carstensen is Professor of Psychology at Stanford, where she is also the Fairleigh S. Dickinson Jr. Professor in Public Policy. For more than 20 years her research has been supported by the National Institute on Aging, and in 2005 she was honored with a MERIT award. Carstensen is best known for socioemotional selectivity theory, a life-span theory of motivation. With her students and colleagues, she has published well over 100 articles on life-span development. In 2009, she authored "A Long Bright Future: An Action Plan for a Lifetime of Happiness, Health, and Financial Security."

Dr. Carstensen's most current empirical research focuses on ways in which motivational changes influence cognitive processing. She is a fellow in a number of professional organizations including the Association for Psychological Science, the American Psychological Association and the Gerontological Society of America. She serves on the Board of Science Advisors to the Max Planck Institute for Human Development in Germany and has chaired two studies for the National Academy of Sciences, resulting in The Aging Mind and When I'm 64. She is a member of the MacArthur Foundation's Research Network on an Aging Society.

She has been selected as a Guggenheim Fellow and received the Richard Kalish Award for Innovative Research, the Distinguished Career Award from the Gerontological Society of America, and Stanford's Dean's Award for Distinguished Teaching. She received a BS from the University of Rochester and PhD in Clinical Psychology from West Virginia University.

Thomas A. Rando, MD, PhD
Deputy Director



Tom Rando is Professor of Neurology and Neurological Sciences at Stanford. He is also Chief of Neurology and Director of the Geriatric Research, Education, and Clinical Center at the Veterans Affairs Palo Alto Health Care System. He is a founding director of the Muscular Dystrophy Association clinic at the Stanford Medical Center.

Dr. Rando's research focuses on tissue-specific stem cells in aging and disease, and on pathogenetic mechanisms and gene therapy for muscular dystrophies. His research on aging has demonstrated that it is possible to identify biochemical stimuli that can induce stem cells in old tissues to repair injuries as effectively as in young tissues, and this work has broad implications for the fields of regenerative medicine and stem cell transplantation.

He is a member of several professional societies including the American Neurological Association. He is a former Paul Beeson Physician Faculty Scholar in Aging awarded by the American Federation for Aging Research, and he is currently an Ellison Medical Foundation Senior Scholar in Aging. In 2005, he received an NIH Director's Pioneer Award for his groundbreaking research in stem cell biology. He received a BA from Harvard College, MD from Harvard Medical School and PhD in Cell and Developmental Biology from Harvard University.

Leading the Discussion
(continued)

TOM RANDO

• Presented on the **"Regulation of Stem Cell Functionality in Aged Tissues: The Complex Role of Wnt Signaling*"** at an **American Federation for Aging Research Conference on Cancer and the Biology of Aging** in New York City. (October 2008)

• Provided keynote lecture, **"Molecular regulation of muscle stem cell quiescence, activation, and proliferation: The Complex Role of Wnt Signaling,"** at the sixth annual **Cardiovascular Stem Cell Meeting** in Tokyo. (January 2009)

• Delivered the keynote lecture, **"Genetic and Epigenetic Regulation of Muscle Stem Cell Fate"**, at **the National Institute of Arthritis and Musculoskeletal and Skin Diseases** annual retreat in Bethesda, MD. (May 2009)

** Wnt signaling refers to a biochemical pathway used by cells when responding to changes in their environment"*

PEOPLE: Senior Staff

Leading the Discussion *(continued)*

ADELE HAYUTIN

• Discussed **"Demographic Perspectives on Social Inclusion"** in a speech to the **International Association of Geriatrics and Gerontology in Paris.** (July 2009)

• Moderated the plenary session on **the Four Pillars of Economic Security** at the **Reinventing Retirement Asia: Employment and Active Engagement Beyond 50** conference co-hosted by **the Council for the Third Age and AARP** in Singapore.

"The increase in life expectancy over the past century is a remarkable success story," Dr. Hayutin said. "But that success story would be even better if we had policies, social infrastructure and long-term strategies that fit the new reality of our aging population." (January 2009)

Individuals listed served on the Center staff during all or part of the 2008-2009 academic year

Martha Deevy, MBA

Consulting Assistant Professor & Senior Research Scholar

Martha Deevy focuses on the Center's business strategy and key partnerships, and leads the Center's financial security work. She has more than 20 years of management experience in Silicon Valley technology and financial services companies in senior executive positions at Apple, Charles Schwab and Intuit. She received a BA from the University of Illinois and MBA in finance and management information systems from the University of Minnesota.

Margaret Dyer-Chamberlain, MALD

Director, Programs and Operations & Senior Research Scholar

Margaret Dyer-Chamberlain develops research and educational programs, securing funding for Center programs, assisting in cultivation of donors, and overseeing staff and consultants. She is a former senior director of capital planning and space management at Stanford and associate provost at Dartmouth College. She received a BA from Smith College and Master of Arts in Law & Diplomacy from the Fletcher School of Law and Diplomacy at Tufts University.

Anne L. Friedlander, PhD

Director, Mobility Division & Senior Research Scholar

Anne Friedlander develops innovative strategies to enhance mobility and function throughout the lifespan and promotes collaborative efforts with industry. She is a consulting professor in the Stanford Program in Human Biology. She received a BA from Wesleyan University, MA and PhD in exercise physiology from the University of California, Berkeley, and conducted postdoctoral training in the Division of Endocrinology, Geriatrics and Metabolism at the Stanford School of Medicine.

Steve Goldband, PhD

Director, Private Sector Initiatives & Senior Research Scientist

Steve Goldband works to create new and innovative collaborations between Stanford researchers and industry. He has been a technology entrepreneur and worked in various management, marketing and engineering roles. He was a member of the psychology department faculty at University of Western Ontario. He received a BA from Cornell University and PhD in psychology from the University at Buffalo.

Adele Hayutin, PhD

Director, Global Aging Program & Senior Research Scholar

Adele Hayutin focuses on economic and policy implications of global demographic change. During a 20-year career as a business economist, she has specialized in issues and trends affecting business investment strategy. She was chief economist of the Fremont Group (formerly Bechtel Investments), senior real estate analyst at Salomon Brothers and director of research at RREEF. She received a BA from Wellesley College, MA in public policy and PhD in economics from the University of California, Berkeley.

Jane Hickie, JD

Director, Politics, Scholars and the Public Program & Senior Research Scholar

Jane Hickie develops strategies for transforming the culture around aging and leads the Center's work to inform policy decisions that impact longevity. She formerly led the government relations practice at Public Strategies Inc., was a partner in the law firm of Verner, Lipfert, Bernhard, McPherson and Hand, and served as director of the Texas Office of State and Federal Relations and director of Appointments to Boards, Commissions and the Judiciary for the Office of the Governor. She received a BA from Mount Holyoke College and JD from the University of Texas.

BREAKING THE MOLD ON COLLABORATION

The Stanford Center on Longevity has a unique and targeted approach to conferences.

We identify Stanford faculty and other world-class experts from a range of fields and across disciplines, and invite them to campus for a two-day meeting on a specific longevity issue. Key practitioners are included, as well as potential research funders and influential policy makers.

The agenda is clear and results oriented. There are no prepared talks. Although a few charts are used on occasion, the Center's approach is that freeing conferees of a battery of slides will free them from rote thinking as well. That way, participants can then look at problems with fresh eyes.
(continued p. 28)

PEOPLE: Senior Staff

Big issues are on the table early, as participants exchange research papers and links on a Center-hosted website constructed specifically for the conference. By the time the group convenes, the conversation is already underway. Around the conference table, guided discussions focus on key questions, consensus building and next steps.

The process does not end when participants go home. Rather, these conferences launch an array of activities designed to bring scientific and technological expertise to bear on society's most pressing problems. Products that result from the conferences range from new interdisciplinary research agendas to briefings for Washington policy makers to funding for faculty research.

Chris Peacock

Director, Communications and Public Affairs

Chris Peacock is responsible for communicating with media, opinion leaders and policy makers about the Center's efforts to improve the quality of life from childhood to old age. He has developed communications and marketing programs in the corporate, foundation and government worlds, including serving as a communications advisor to the secretaries of Treasury and Health & Human Services, the Henry J. Kaiser Family Foundation, Silicon Valley Community Foundation and Cisco Systems Inc. He received a BA from Washington & Lee University.

Ken Smith, MS

Director, Academic and Research Support & Senior Research Scholar

Ken Smith focuses on the identification and management of key research areas and opportunities for the Center, and works closely with faculty affiliates to determine where Stanford expertise can best be used to drive change. He has more than 20 years of management and engineering experience, including positions in the computing, aerospace and solar energy industries, including Intel Corp.'s network of university research labs. He received a BS from the University of Illinois and MS in engineering from the University of Washington.

PEOPLE: Support Staff

Susan Campbell
Assistant to the Deputy Director

Jill Chinen
Assistant to the Director

Miranda Dietz
Research Assistant

Hal Ersner-Hershfield
Director, Financial Security Division

Jill Fattor
Research Assistant

Casey Lindberg
Director, Mind Division

Lillian Mitchell
Research Assistant

David Pagano
Webmaster

Lauren Smith
Administrative Assistant

Sharon Vazquez
Administrative Assistant

CONFERENCE:

Demographic Change in Asia

Academic experts and leaders from business, government and the community met to generate hypotheses about the future of Asia based on critical uncertainties in demographic change.

The Center and **the Asia Health Program** at **the Walter H. Shorenstein Asia-Pacific Research Center** convened the conference, titled **Aging Asia: Economic and Social Implications of Rapid Demographic Change in China, Japan and Korea**. Participants explored the impact of rapid aging on economic growth, labor markets, social insurance financing, long term care and health care, and synthesized their visions of the future by prioritizing driving forces and creating potential scenarios. (February 2009)

EXTERNAL ADVISORY COUNCIL

The External Advisory Council helps advise and guide the Center by providing informed external perspective on goals, priorities and programs, and by advocating on the Center's behalf beyond the Stanford community. The Council first met in June 2009.

Katherine August-deWilde

President and Chief Operating Officer, First Republic Bank

Katherine August-deWilde has been an executive with First Republic Bank since 1985. First Republic, a private bank and wealth management company, is a wholly owned subsidiary of Merrill Lynch Bank and Trust. Prior to joining First Republic, August-deWilde spent six years at the PMI Group as senior vice president and chief financial officer. She is a former director of finance for Intel Corp. and consultant for McKinsey & Company. Her volunteer work at Stanford includes two terms on the Graduate School of Business Advisory Council, the GSB Women's Initiative, GSB admissions interviewer, and a parents volunteer and member of the Leading Matters Steering Committee for San Francisco. She has served as a trustee at San Francisco's Town School for Boys and on the board of the Carnegie Foundation for the Advancement of Teaching. She received an AB from Goucher College and MBA from Stanford.

Pat Christen

President and CEO, HopeLab

At HopeLab, Pat Christen engages a multidisciplinary team developing products and practices that improve the lives of young people with chronic illness. Under her leadership, HopeLab launched the groundbreaking Re-Mission video game for cancer in 2006; research demonstrating the efficacy of Re-Mission in improving treatment adherence was published in the medical journal Pediatrics in 2008. She previously was president and executive director of the San Francisco AIDS Foundation, where she worked with counterparts nationally to craft the federal Ryan White C.A.R.E. Act, and served as president of the Pangaea Global AIDS Foundation. She has written, studied and lectured on social and health issues in the United States and abroad, and is a member of the Young Presidents' Organization. She received a BA from Stanford.

Mark T. Gates, Jr.

Developer

Mark Gates is involved with office, retail and industrial properties on the San Francisco peninsula and in Southern California. He represented The Chronicle Publishing Co. in San Francisco from 1985-1992 as a real estate consultant and was a consultant for Lowe Financial S.A., an investment company based in Geneva, Switzerland. He was a partner in Wilson and Gates, a real estate development and management company, and a founding partner of Dietsch, Gates, Morris and Merrell, a law firm specializing in airline and banking law. His board and stewardship activities have included the Children's Health Council in Palo Alto, St. Luke's Hospital Foundation in Idaho and the California State Board of Education. He received a BA from Dartmouth College and LLB from Stanford.

Donald Kennedy

President Emeritus, Stanford University

In addition to serving as President, Emeritus of Stanford University, Donald Kennedy is Bing Professor of Environmental Science, Emeritus and, by courtesy, a senior fellow of the Center for Environmental Science and Policy. His present research program entails policy research on such trans-boundary environmental problems as major land-use changes, economically driven alterations in agricultural practice, global climate change, and the development of regulatory policies. He has served on the Stanford University faculty since 1960 and was President of the University from 1980-1992. He was Commissioner of the U. S. Food and Drug Administration from 1977-79. Previously at Stanford, he was director of the Program in Human Biology and chair of the Department of Biology. He is a former editor-in-chief of "Science" – the journal of the American Association for the Advancement of Science. He is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Society. He served on the National Commission for Public Service and the Carnegie Commission on Science, Technology and Government, and as a founding director of the Health Effects Institute. He is a director of the Carnegie Endowment for International Peace and co-chair of the National Academies' Project on Science, Technology and Law. He received AB and PhD degrees in biology from Harvard University.

PEOPLE: External Advisory Council

Scott W. Kerslake
President, prAna

Scott W. Kerslake is president of prAna, a leading consumer brand in yoga, rock climbing and active outdoor living, and maintains ownership of Carrot Centers for Brain and Body Vitality, a progressive wellness organization focused on helping people over 50 age optimally. He is former president of Miraval Life in Balance. He founded and was chairman and CEO of Athleta Corporation; he created the Athleta brand, its strategic plan and internal cultural development. Prior to becoming an entrepreneur, Kerslake worked as an investment banker at Salomon Smith Barney and a management consultant with Sapient Corp. He played a significant role in starting Sapient's San Francisco office by helping to manage and grow its team, served as Sapient's director of marketing and was instrumental in the company's successful initial public offering.

Irene Mecchi
Writer

Irene Mecchi is an American writer who has written for print, television, live-action film and theatre. Her feature film writing credits include Disney's "The Lion King," "The Hunchback of Notre Dame" and "Hercules." She is co-author of "The Lion King," Broadway, directed by Julie Taymor. The show won six Tony Awards – including Best Musical. Mecchi adapted the Broadway musical, "Annie," for ABC and is currently developing an animated film for Pixar that will be released in 2011, as well as a television adaptation of Broadway's classic musical, "Peter Pan." She has a production company which is acquiring literary material written for young adults in order to produce a slate of films. Mecchi received a BA from the University of California, Berkeley and continued her studies at the American Conservatory Theatre in San Francisco.

Thomas E. Moore III
Director, Barclays Wealth

Thomas Moore is a director with Barclays Wealth, specializing in advising wealthy families, foundations and charitable organizations on investment and financial matters. He has more than 25 years of banking and investment experience. Prior to joining Barclays Wealth, he was a principal and seasoned investment and financial specialist with Bernstein Global Wealth Management, where he advised sophisticated client relationships in the United States, Europe, the United Kingdom and Asia. He is a former managing director of the New York Stock Exchange, where he was responsible for U.S. new business development and strategies, managing U.S.-listed company relationships, and was a member of the Eligibility Review Committee charged with reviewing the qualifications of companies and approving their listing on the NYSE. Earlier, he was a credit and lending officer with several New York-based money center banks, including The Bank of New York and Citibank. He is a competitive equestrian show jumper and is very active in numerous educational, cultural and charitable organizations including the Human Rights First Organization, the New York Academy of Art, and Student Sponsor Partnership. He received a BA from Stanford University.

John W. Rowe, MD · *Council Chair*
Professor, Columbia University

Jack Rowe, who chairs the Center's External Advisory Council, is a professor in the Department of Health Policy and Management at the Columbia University Mailman School of Public Health. Previously, he served as chairman and CEO of Aetna Inc., one of the nation's leading health care and related benefits organizations, from 2000-2006. He is former president and CEO of Mount Sinai NYU Health, one of the nation's largest academic health care organizations; prior to the Mount Sinai-NYU Health merger, he was president of the Mount Sinai Hospital and the Mount Sinai School of Medicine in New York City. He was a professor of medicine and founding director of the Division on Aging at the Harvard Medical School, as well as Chief of Gerontology at Boston's Beth Israel Hospital. Currently, he leads the MacArthur Foundation's Initiative on An Aging Society and chairs the Institute of Medicine's Committee on the Future Health Care Workforce for Older Americans. He was elected a member of the Institute of Medicine of the National Academy of Sciences and a Fellow of the American Academy of Arts and Sciences. He serves on the Board of Trustees of the Rockefeller Foundation and is a former member of the Medicare Payment Advisory Commission (MedPAC). He chairs the Board of Trustees at the University of Connecticut and the Marine Biological Laboratory in Woods Hole, Massachusetts. He received an MD from the University of Rochester School of Medicine and Dentistry and BS from Canisius College.

George Shultz

Former U.S. Secretary of State

George Shultz has had a distinguished career in government, academia and business. He held four different cabinet posts, he taught at three of United States' greatest universities, and he was president of a major engineering and construction company. He began his service to the nation as a Marine. Early in his career, he served as a senior staff economist on President Eisenhower's Council of Economic Advisors. He taught at the Massachusetts Institute of Technology and The University of Chicago, where he served as dean of the business school. He resumed public service under President Nixon as Secretary of Labor, Director of the Office of Management and Budget, and Secretary of the Treasury. He left government service in 1974 to become president and director of the Bechtel Group, Inc. He held two key positions in President Reagan's administration: Chairman of the President's Economic Policy Advisory Board and Secretary of State. His awards include the Medal of Freedom, the nation's highest civilian honor, and the Seoul Peace Prize. He has been a Distinguished Fellow at the Hoover Institution at Stanford since 1989. He received a BA from Princeton University and PhD in industrial economics from MIT.

David A. Wise

Professor, Harvard University

David Wise is John F. Stambaugh Professor of Political Economy, Kennedy School of Government at Harvard University. His research includes analysis of youth employment, the economics of education and schooling decisions, and methodological econometric work. His work now focuses on issues related to population aging, and he directs a large project on the economics of aging and health care at the National Bureau of Economic Research. His books and papers include: "Social Security and Retirement Around the World", "Frontiers in the Economics of Aging," "Facing the Age Wave," "Inquiries in the Economics of Aging," "Social Security and Retirement Around the World: Micro-Estimation," "The Transition to Personal Accounts and Increasing Retirement Wealth: Macro and Micro Evidence," "Aging and Housing Equity: Another Look," "Implications of Rising Personal Retirement Saving," "The Taxation of Pensions: A Shelter Can Become a Trap," "Utility Evaluation of Risk in Retirement Saving Accounts," and "Analyses in the Economics of Aging". He has an MA in statistics and PhD in economics from University of California, Berkeley.

FACULTY STEERING COMMITTEE

The Faculty Steering Committee provides guidance for the Center's research agenda and helps identify and engage faculty from across Stanford whose research can help meet the challenges of an aging population.

Thomas Andriacchi, PhD - *Professor of Mechanical Engineering and Orthopaedic Surgery*

Tom Andriacchi's research focuses on the biomechanics of human locomotion and its biomedical applications to artifcial joints, sports injury, osteoarthritis, and neuromuscular disorders.

William Damon, PhD - *Professor of Education*

Bill Damon, who is director of the Stanford Center on Adolescence, writes on moral development through the lifespan. He has begun a study on the development of purpose during adolescence and is conducting research on how young professionals can learn to do work that is both highly masterful and highly moral.

Alan M. Garber, MD, PhD - *Professor of Medicine/Economics/Health and Research Policy*

Alan Garber is director of the Center for Health Policy/Center for Primary Care and Outcomes Research. His research focuses on methods for improving healthcare delivery and financing, particularly for the elderly, in settings of limited resources.

Larry Kramer, JD - *Dean, Stanford Law School*

Larry Kramer's work is directed toward state-state and state-federal confict of laws, federalism and its history, and the role of courts in society.

Iris F. Litt, MD - *Professor of Pediatrics*

Iris Litt's research is focused on the health problems of adolescents, including substance abuse, prevention of pregnancy and sexually transmitted diseases, gender differences, compliance with medical regimens and the long-term consequences of eating disorders in young adolescent women.

Pamela Matson, PhD - *Dean, School of Earth Sciences/Professor of Environmental Studies*

Pamela Matson's research focuses on biogeochemical cycling and land/water interactions in tropical forests and agricultural systems, and on sustainability science.

Margaret Neale, MS, PhD - *Professor, Graduate School of Business*

Margaret Neale studies cognitive and social processes that produce departures from effective negotiating behavior.

John Shoven, PhD - *Professor of Economics*

John Shoven, who is director of the Stanford Institute for Economic Policy Research, focuses on tax policy, Social Security, and savings patterns.

PEOPLE: Faculty Affiliates

Nearly 130 Stanford faculty members from across the university are Center affiliates. Their research spans a remarkable gamut: from examining strategies for developing healthy nutritional habits and building assistive robots, to pursuing stem cell research offering insights into the healing process and improving health care delivery. Faculty affiliates come from diverse backgrounds and represent a cross-section of disciplines and viewpoints from across the Stanford community, and they are among our closest partners in helping change the culture of aging.

FACULTY AFFILIATES

Jennifer Aaker, PhD - Professor of Marketing
Hamid Aghajan, PhD - Professor of Electrical Engineering
Scott Atlas, MD - Professor of Radiology
Thomas Andriacchi, PhD - Professor of Mechanical Engineering/Orthopaedic Surgery
Steve Artandi, MD, PhD - Assistant Professor of Medicine
Jeremy Bailenson, PhD - Assistant Professor of Communication
Albert Bandura, PhD - Professor Emeritus of Psychology
Clifford Barnett, PhD - Professor Emeritus of Anthropological Science
B. Douglas Bernheim, PhD - Professor of Economics
Jay Bhattacharya, MD, PhD - Associate Professor of Medicine
Coit Blacker, PhD - Professor of Political Science
Helen Blau, PhD - Professor of Medicine
Walter Bortz, MD - Adjunct Clinical Associate Professor of Medicine
Gordon Bower, PhD - Professor of Psychology
David Brady, PhD - Professor of Political Science
Anne Brunet, PhD - Assistant Professor of Genetics
Kate Bundorf, MBA, MPH, PhD - Assistant Professor of Health Research and Policy
Chang-Zheng Chen, PhD - Professor of Microbiology/Immunology
Glenn Chertow, MD, MPH - Professor of Nephrology
Katrin Chua, MD, PhD - Assistant Professor of Medicine
Karen Cook, PhD - Professor of Sociology
Linda Cork, PhD - Professor of Comparative Medicine
William Damon, PhD - Professor of Education
Scott Delp, PhD - Professor of Mechanical Engineering/Orthopaedic Surgery
Carol Dweck, PhD - Professor of Psychology
Alain Enthoven, PhD - Professor of Public and Private Management
James Fishkin, PhD - Professor of International Communication/ Political Science
Mike Fredericson, MD - Professor of Orthopaedic Surgery
Lawrence Friedman, JD - Professor of Law
James Fries, MD - Professor of Immunology and Rheumatology
Victor Fuchs, PhD - Professor Emeritus of Economics
Dolores Gallagher Thompson, MD - Professor of Medicine
Alan Garber, MD, PhD - Professor of Medicine/Economics/Health and Research Policy
Christopher Gardner, PhD - Associate Professor of Medicine
Gary Glover, PhD - Professor of Radiology/Electrical Engineering/Psychology
Garry Gold, MD - Associate Professor of Radiology
Jeremy Goldhaber-Fiebert, PhD - Assistant Professor of Medicine
Mary Goldstein, MD - Professor of Medicine
Stuart Goodman, MD - Professor of Orthopaedic Surgery/Orthopaedics
Ian Gotlib, PhD - Professor of Psychology
Hank Greely, JD - Professor of Law
Harry Greenberg, MD - Professor of Medicine
Michael Greicius, MD, MPH - Assistant Professor of Neurosurgery
James Gross, PhD - Professor of Psychology
William Haskell, MD - Professor of Medicine
Albert Hastorf, PhD - Professor of Human Biology
Cathy Heaney, PhD - Consulting Assistant Professor
H. Craig Heller, PhD - Professor of Biological Sciences
Stefan Heller, PhD - Professor of Otolaryngology

Victor Henderson, MD - Professor of Health Research and Policy/Neurology/Neurological Sciences
Andrew Hoffman, MD - Professor of Medicine
Ron Howard, PhD - Professor of Management Science/Engineering
Ting-Ting Huang, PhD - Assistant Professor of Neurology and Neurological Sciences
James Holland Jones, PhD - Assistant Professor of Anthropological Sciences
Laurence Katznelson, MD - Assistant Professor of Neurosurgery/Medicine
Daniel Kessler, JD, PhD - Professor of Law/Health and Research Policy
Stuart Kim, PhD - Professor of Developmental Biology/Genetics/Chemical and Systems Biology
Sun Kim, MD - Assistant Professor of Medicine
Abby King, PhD - Professor of Health Research and Policy/Medicine
Brian Knutson, PhD - Professor of Psychology
Frederic Kramer, MD - Professor of Endocrinology
Roderick Kramer, PhD - Professor of Organizational Behavior
Larry Kramer, JD - Dean, School of Law
Eswar Krishnan, MD, M.Phil - Assistant Professor of Medicine
Jon Krosnick, PhD - Professor of Communication
John Krumboltz, PhD - Professor of Education/Psychology
Larry Leifer, PhD - Professor of Mechanical Engineering
Marc Levenston, PhD - Associate Professor of Mechanical Engineering
Iris Litt, PhD - Professor of Pediatrics
James Lock, MD, PhD - Professor of Psychiatry and Behavioral Sciences
Kate Lorig, PhD - Professor of Medicine
Bingwei Lu, PhD - Assistant Professor of Medicine
Tanya Luhrmann, PhD - Professor of Anthropology/Psychology
William Maloney, MD - Professor of Orthopaedics
Ellen Markman, PhD - Professor of Psychology
Pamela Matson, PhD - Dean of the School of Earth Sciences
Yoshiko Matsumoto, PhD - Associate Professor of Japanese Language and Linguistics
Samuel McClure, PhD - Assistant Professor of Psychology
Debra Meyerson, PhD - Associate Professor of Education
William Mobley, MD, PhD - Professor of Neurology/ Neurological Sciences
Margaret Neale, PhD - Professor of Organizational Behavior
Lorene Nelson, PhD - Associate Professor of Health Research and Policy
Ruth O'Hara, PhD - Assistant Professor of Psychiatry/Behavioral Sciences
Ingram Olkin, PhD - Professor of Statistics/Education
Alan Pao, MD - Professor of Nephrology
John Pencavel, PhD - Professor of Economics
John Perry, PhD - Professor of Philosophy
Jeffrey Pfeffer, PhD - Professor of Organizational Behavior
James Phills, PhD - Associate Professor of Organizational Behavior
Peter Pompei, MD - Associate Professor of Medicine
Beth Pruitt, PhD - Assistant Professor of Mechanical Engineering
Natalie Rasgon, MD, PhD - Professor of Psychiatry and Behavioral Sciences/Obstetrics and Gynecology
Gerald Reaven, MD - Professor Emeritus of Medicine
Byron Reeves, PhD - Professor of Communication
Tony Ricci, PhD - Associate Professor of Otolaryngology
Tom Robinson, PhD - Associate Professor of Pediatrics/Medicine
William Robinson, PhD - Assistant Professor of Medicine
Jessica Rose, PhD - Professor of Orthopaedic Surgery

CONFERENCE:

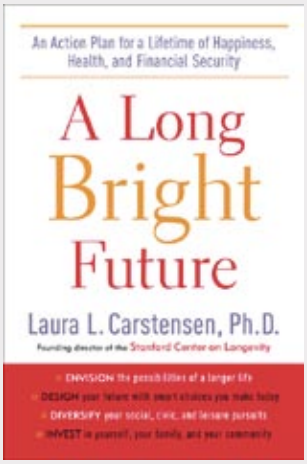
Tips for Navigating the Marketplace of Memory Aids

Cognitive and brain experts convened by the Center urged consumer caution on memory fitness products. A statement released by the Center, on behalf of 30 of the world's finest cognitive and brain scientists, May 2009 provided public guidance on products claiming to improve mental fitness and the science behind them.

The statement resulted from **the Expert Consensus on Brain Health summit** in April 2008 sponsored by the Center and **the Max Planck Institute for Human Development** in Berlin. The goal was to develop a public statement regarding the science behind products claiming to defend against memory loss. It coincided with heightened public attention on the issue of mental health resulting from a new HBO documentary series focusing on Alzheimer's disease. (May 2009)

BOOK:

Thinking about Growing Old – In an Entirely New Way



Many people are so convinced that old age is a time of misery, they simply deny any other outcome and don't plan their own destiny.

In **A Long Bright Future**, center founding director Laura Carstensen seeks to shed myths and misconceptions. "You have the chance, starting now," she writes, "to design for yourself an old age that is not only different, but better than any previous generations in human history."

Lee Ross, PhD - Professor of Psychology
Kenneth Salisbury, PhD - Professor of Computer Science/Surgery
Richard Saller, PhD - Dean of Humanities and Sciences, Professor of Classics/History
Juan Santiago, PhD - Assistant Professor of Mechanical Engineering
Robert Sapolsky, PhD - Professor of Biological Sciences/Neurosciences
William F. Sharpe, PhD - Professor of Finance
Kathryn Shaw, PhD - Professor of Economics
Baba Shiv, PhD - Associate Professor of Marketing
John Shoven, PhD - Professor of Economics
Robert Lane Smith, MD - Professor of Orthopaedic Surgery/Mechanical Engineering
Samuel So, MD - Professor of General Surgery
Jeanne Tsai, PhD - Associate Professor of Psychology
Shripad Tuljapurkar, PhD - Professor of Population Studies and Biological Sciences
Anthony Wagner, PhD - Associate Professor Psychology
Michael Wald, JD - Professor of Law
Brian Wandell, PhD - Professor of Psychology/Electrical Engineering
Carol Winograd, PhD - Professor Emeritus of Medicine
Terry Winograd, PhD - Professor of Computer Science
Paul Wise, MD, PhD - Professor of Medicine
Tony Wyss-Coray, PhD - Associate Professor of Neurology/Neurological Sciences
Jerome Yesavage, MD - Professor of Psychiatry and Behavioral Sciences
Paul Yock, MD - Professor of Medicine
Jamie Zeitzer, PhD - Assistant Professor of Psychiatry and Behavioral Sciences
Stefanos Zenios, PhD - Professor of Operations, Information and Technology

ADDITIONAL AFFILIATES

Wesley Alles, MD - Senior Research Scholar
Dena Bravata, MD - Stanford Health Policy Affiliate
Karen Eggleston, PhD - Center Fellow, Freeman Spogli Institute for International Studies
Leah Friedman, MD - Senior Research Scholar
Rita Ghatak, PhD - Director, Aging Adult Services, Stanford University Medical Center

UNDERGRADUATE COURSE ON LONGEVITY

Center on Longevity Director Laura Carstensen and Deputy Director Tom Rando co-teach the Longevity course at Stanford. In this course, more than 100 students learn about the personal and societal implications of people now living longer. The course explores myths and misconceptions surrounding the aging process and provides students with an informed grasp of the conceptual issues, empirical findings and current controversies in the field.

The course has three central aims:

- Help students understand why, from a biological/biomedical perspective, the population is aging and what to expect in the coming decades. Will current trends continue? How long can future generations expect to live? How are lifestyles, families and work likely to change?

- Provide students with a more realistic vision of their own futures so they can make informed life choices and plans.

- Educate future generations of citizens, who will live out their lives in societies where older people outnumber children and who will have a central hand in shaping the consequences of these unprecedented changes.

By adopting a multidisciplinary approach, Carstensen, a psychologist and life-span developmentalist, Rando, a neurologist and biogerontologist, and distinguished guest lecturers help students understand new challenges to health care, financial markets, families, work and politics as they relate to aging and longevity.

EVENT:

The Physics of Motion

Streb vs. Gravity, a performance that included dancers, gymnasts and a focus on the physics of motion, was part of a collaboration between Stanford and New York-based choreographer **Elizabeth Streb**. Students in the undergraduate Longevity course were able to participate in a special conversation with Streb on mobility and aging, hosted by Center director Laura Carstensen.
(January 2009)

EVENT:

An Evening with Anna Deveare Smith

The Center's work considers ways in which cultures succeed and fail to support people in aging well or not aging at all. For **"An Evening with Anna Deveare Smith"** the acclaimed, provocative writer performed excerpts from her new work, **"Let Me Down Easy,"** which concerns "the fragility of bodies, the inevitability of death, and the ways in which we nevertheless find moments of transcendence despite those immovable facts." (June 2009)

UNDERGRADUATE INTRODUCTORY SEMINAR ON LIFE- SPAN DEVELOPMENT

Most research on human development focuses on the early years in life, the years when children are forming strong attachments to caretakers, acquiring language and learning to navigate the world. Yet, people continue to change in systematic ways throughout life, and gains and losses are associated with every stage of life.

The Seminar on Life-Span Development addresses adult development from the perspective of life-span theory – a conceptual framework that views development as a series of adaptations to physical, societal, and individual resources and constraints. Students learn about the profound demographic and medical changes that will surely shape their own futures, as well as the ways that individuals typically change socially, emotionally and cognitively as they move through adulthood.

Some of these changes are biologically based, others are rooted in motivation. Still others reflect a complex interaction between biological and psychological processes. The objective of the course, first offered in Spring 2009, is to provide students with an understanding of the conceptual foundations of the life-span approach and familiarize them with empirical findings in the literature as well as current controversies in the field.

UNDERGRADUATE STUDENT PRACTICUM

The Center offers a variety of projects through its Student Practicum, which enables students to obtain hands-on experience.

The practicum is structured as an internship that involves the student in day-to-day work on Center projects. Assignments include completing literature searches, compiling articles and documents, writing summaries, and collecting and organizing data. Students work approximately nine hours per week during the 10-week quarter in the practicum, and receive three credits.

UNDERGRADUATE COURSE ON EXERCISE PHYSIOLOGY AND METABOLISM

To accompany her research on physiology, Anne Friedlander, director of the mobility division, teaches Applied Topics in Exercise Physiology and Metabolism each spring. The course covers scientific research on topics related to aging, exercise physiology and mobility. It includes an exercise physiology lab and field work experience.

FRESHMAN SEMINAR ON LONGEVITY

Maecenas pellentesque tellus ut massa dapibus sagittis. Fusce ultrices dui nec erat venenatis fermentum. Nulla facilisi. Curabitur pretium facilisis sem, sit amet pulvinar lacus bibendum eget. In est massa, consequat id posuere vitae, ultricies sed felis. Nulla facilisi.

POSTDOCTORAL FELLOWSHIPS ENCOURAGE UP-AND-COMING SCIENTISTS

The challenges of aging are complex and interrelated. New medical treatments will have limited impact if most people cannot afford them. Research on longevity must therefore encompass many different fields of study and encourage cooperation among experts who may not have worked together in the past. Accelerating longevity research also depends on supporting up-and-coming scientists.

The Stanford Center on Longevity received 15 applications for new postdoctoral fellowships in 2009 and awarded funding to three. The Center judged these applications on overall scientific merit as well as clarity and persuasiveness. Training potential was judged on the opportunity for strong mentoring, overall training environment, and with a strong emphasis on a proposal's interdisciplinary nature and relevance to aging or longevity. Post-doctoral fellows brief Center staff on their research, with presentations and a question-and-answer session each year.

SLAM: Spreading The Word About Longevity

A group of students who took the **Life-Span Development seminar** in Spring 2009 created the **Stanford Longevity Action Movement – SLAM**. Their goal is to promote awareness about longevity and related topics on the Stanford campus, and spread the message to other colleges and communities. at other colleges and in the community.

POSTDOCTORAL FELLOWS FOR 2008-2009 ARE:

Jerome Bonnet, PhD - Bioengineering
Project: Engineering a cell cycle counter to study replicative aging
Mentor: Andrew Endy - Assistant Professor of Bioengineering

Christopher Bryan, PhD - Psychology
Project: Owing it to yourself: Exploring the effectiveness of duty-based arguments in motivating retirement saving
Mentor: Greg M. Walton, PhD - Assistant Professor of Psychology
Secondary Mentor: Dale T. Miller, PhD - Professor of Organizational Behavior

Alicia Chang, MD - Medicine and Health Research and Policy
Project: Addressing the challenge of global population aging: the effect of age on immune response to TB infection
Mentor: Julie Parsonnet, MD - Professor of Medicine
Secondary Mentor: Paul Utz, MD - Associate Professor of Medicine

Tammy English, PhD - Psychology
Project: Impact of emotion and cognition on health-related decisions in everyday life
Mentor: Laura Carstensen, PhD - Professor of Psychology

David Furman, PhD - Microbiology and Immunology
Project: High throughput multiparameter analysis of human immune responses to influenza vaccination
Mentor: Mark Davis, PhD - Professor of Microbiology and Immunology

Adolfo Sanchez-Blanco, PhD - Developmental Biology
Project: A molecular odometer for aging
Mentor: Stuart Kim, PhD - Professor of Developmental Biology/Genetics/Chemical and Systems Biology
Secondary Mentor: Art Owen, PhD - Professor of Statistics

Marina Shkreli, PhD - Professor of Medicine
Project: Understanding cellular renewal and aging in kidney epithelium
Mentor: Steve Artandi, MD, PhD - Associate Professor of Medicine

Dario Riccardo Valenzano, PhD - Genetics
Project: Identifying genes regulating longevity
Mentor: Anne Brunet, PhD - Assistant Professor of Genetics

FACULTY RESEARCH

FACULTY SEED GRANTS

Through seed grants to Stanford faculty, the Center provides university research awards of up to $50,000 for a year. These research projects are selected from applications across Stanford that focus on solutions to improve life at all ages. The Center's goal is that studies funded by these awards will lead to support from external sponsors or have tangible impacts in the private or public sector.

Awardees for 2008-2009 are:

Thomas Andriacchi, School of Engineering
Project: Developing and testing a device to reduce falling

Steven Artandi, School of Medicine
Project: Restoring fitness and extending lifespan in a mammalian model of aging

Jay Bhattacharya, School of Medicine
Dena Bravata, School of Medicine
Project: The longevity and health impact of gardening

Helen Blau, School of Medicine
Juan Santiago, School of Engineering
Project: Drug delivery micropump for rejuvenation of muscle stem cell function on old mice

Kate Bundorf, School of Medicine
Jay Bhattacharya, School of Medicine
Rui Mata, Department of Psychology
Michael Schoenbaum, National Institute of Mental Health
Project: The financial implications of health plan choices: The case of Medicare Part D prescription drug plans

Chang-Zheng Chen, School of Medicine
Project: The role of miRNA's in T-cell aging and thymic involution

REPORT:

Early Detection of Osteoarthritis

Mechanical engineers, orthopedic surgeons, radiologists, biologists and epidemiologists – each studying osteoarthritis through their respective disciplines and convened by the Center – identified research questions that will lead to improved understanding and early detection of osteoarthritis. The goal of **Joint Health Workshop: Early Detection of Osteoarthritis** was to understand joint degeneration from the systems perspective, recognizing that the cartilage responds to the environment of the whole joint. The conference, held in January 2009, led to a grant proposal that aims to answer questions generated by the international group of experts.

The Center presented the workshop in collaboration with the **Stanford School of Engineering**. Dr. Thomas Andriacchi was the lead faculty affiliate.
(January 2009)

CONFERENCE: Longevity Across the Life-span:

With much of the world's population living longer, leading experts from across the globe joined with Stanford faculty to examine multiple perspectives on longevity during the third annual **East-West Alliance Conference.**

Session themes included genetic considerations, stem cells, social correlates, implications for the medical workforce, and economic correlates. Participants discussed biological processes at the cellular and molecular level that offer the possibility of extending lives by slowing the aging process. One panel focused on the latest findings regarding genetic factors involved in longevity, while another explored approaches that focus on stem cells.

The Center on Longevity co-hosted the conference with the **Stanford School of Medicine**, a member of the East-West Alliance, a global network of 10 universities receiving support from the **Li Ka Shing Foundation**. The Alliance convenes a public conference each year at a member institution.
(April 2009)

Michael Grecius, School of Medicine
Brian Wandell, Department of Psychology
Robert Dougherty, Department of Psychology
Project: Cognitive effects of disrupted structural and functional connectivity in the aging brain

Daniel Kessler, School of Law
David Brady, Graduate School of Business
Project: Health reform in the U.S. from the 1990s to 2009-10

Ruth O'Hara, School of Medicine
Natalie Rasgon, School of Medicine
Heather Kenna, School of Medicine
Project: Sleep apnea and insulin resistance: A role in cognitive decline

Alan Pao, School of Medicine
Sun Kim, School of Medicine
Glenn Chertow, School of Medicine
Gerald Reaven, School of Medicine
Project: Pathogenesis of accelerated vascular aging: Insulin resistance and chronic kidney disease as model systems

Jessica Rose, School of Medicine
Scott Atlas, School of Medicine
Gary Glover, School of Medicine
Catherine Chang, School of Electrical Engineering
Dennis Grahn, School of Medicine
Vinh Cao, School of Medicine
Project: An investigation of physiological mechanisms underlying health benefits of Tai Chi

SUPPORTING THE CENTER

HOW TO DONATE

The remarkable speed with which the Stanford Center on Longevity was established refects a generous gift from Stanford alumnus Richard Rainwater, who recognized the need for meeting one of the most urgent challenges of our time: adapting our society to a rapidly aging population. His gift enabled the Center to begin immediately with a core staff and with key program priorities in place. Additional significant supporters include the Stephen Bechtel Fund , which provided funds for the Health Security project.

Gifts help the Center embark on new research projects, develop educational programs, recruit talented faculty and disseminate research findings so they can be put into practice. To discuss opportunities for supporting the Center's work, please contact:

Margaret Dyer-Chamberlain
Director of Programs & Operations

Email: mdyerc@stanford.edu
Phone: (650) 736- 9085

Mailing Address:

Stanford Center on Longevity
Mail Code: 6053
Stanford, CA 94305

Gifts to the Stanford Center on Longevity are tax-deductible under applicable rules. The center is part of Stanford University's tax-exempt status as a Section 501 (c) (3) public charity.

WHAT WILL IT MEAN TO LIVE TWICE AS LONG AS OUR ANCESTORS?

"Many people don't realize that aging is not just about older people. Aging is about the 35-year-old whose financial planning today can mean financial security at age 80. It's about the 50-year-old with kids in college and parents who live far away but can no longer stay by themselves. It's about the 65-year-old who has to keep working, even though she would like to slow down, because pension programs that served her parents will be insufficient, maybe even insolvent."

- Laura L. Carstensen, Founding Director

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