Thomas Piketty on Wealth, Income, and Inequality

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Presentation by **THOMAS PIKETTY**,
Economist, Paris School of Economics; and Author,
Capital in the Twenty-First Century

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ROBERT M. SOLOW, Professor Emeritus, Massachusetts Institute of Technology
BETSEY STEVENSON, Member of the White House Council of Economic Advisors

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CHRISTIAN DORSEY: It is my pleasure to introduce Heather Boushey, who is the Chief Economist and Director of the Washington Center for Equitable Growth and a Senior Fellow at the Center for American Progress. We are pleased to cohost this event with WCEG and with Heather, who will introduce the rest of the panel to get our conversation going.

Heather.

[Applause.]

HEATHER BOUSHEY: Thank you, Christian. It is just our honor at the Washington Center for Equitable Growth to be able to cohost this event with the Economic Policy Institute. I started my career here in Washington at EPI and just thrilled to be able to do this here today, so thank you, Larry, and thank you, Christian and everyone. This is wonderful.

So we are so pleased this morning to be able to have Professor Thomas Piketty from the Paris School of Economics here today.

HEATHER BOUSHEY: So thank you. I mean, this is an amazing morning. It is a very wet, dreary morning here in Washington, and it's amazing to see so many people here today.

I am particularly looking forward to this conversation, as I think many of you are, because I believe that we need to be asking new questions about how our economy is performing. Once President Kennedy could say "a rising tide lifts all boats"; promote growth and all will benefit. However, those of us born after the baby-boomers have seen the world in a different way. The only economic reality we have ever experienced is one where productivity gains go to the top, while leaving the vast majority to cope with stagnant wages, greater hours of work, and most especially in the past decades, rising debt burdens.

We have experienced firsthand the damage this has done to our generation and to the ones that are following. For example, here in the United States, young people take on debt to attend college at prices that would have bought their parents or grandparents a nice house in the suburbs, even as too few actually graduate from those colleges. For us, the golden era of U.S. capitalism, described in many books that I have read, seems about as real as Hogwarts.

The quest to reconsider how our economy is performing is compounded by the fact that economists neither predicted nor prevented the recent economic crisis, and to add insult to injury, we haven't yet fixed it. The share of the U.S. population with a job remains just a few tenths of a percentage point above its lows in 2009 during the Great Recession. But of course, as we all know, profits are up, and those at the top have seen their incomes rise by over 30 percent, capturing 95 percent of all the income gains between 2009 and 2012. And this weekend's *New York Times* was filled with stories of the multi-millionaires and billionaires who are benefiting from this, quote/unquote, recovery from the rich, while the rest of the economy just slogs along. In describing our current economic reality, presidential economics advisor

Gene Sperling may have said it best, "The rising tide will lift some boats, but others will run aground."

One issue that we will discuss today is whether the decades of strong growth and shared prosperity of the decades just after World War II are actually repeatable. This is the critical question for policymakers: What can we do to promote equitable growth? Shall we focus at policies at the bottom like raising the minimum wage or expanding their earned income tax credit? Should our efforts focus on creating solid middle-class jobs, or should we aim our sights on limiting incomes at the top, or should we not focus on any of that, but focus mostly on growth and hope that eventually the gains will go to the rest of us? Which path will be good for the economy as well as for our societies and our democracies? These are the questions that we struggle with every day here in Washington, and ideally, those policy efforts should be informed by a theory of how the economy works that reflects reality.

To do this, we need to reconsider whether or not we have the right tools in our standard economic toolbox to actually understand what drives our economy and what role policy can play in ensuring that the gains of growth are shared. We need to truly understand capitalism and, as our guest Thomas Piketty argues, capital.

That's why I am so pleased to be able to introduce him on this very rainy morning here in Washington. Thomas is pushing us to rethink our approach to the economy and is giving us a new set of tools. He comes to us from Paris, where he is a professor at the Paris School of Economics. He did spend some time here in the United States at MIT when he was a younger scholar, and of course, he is a well-known leader in the recent economics literature on the rising incomes of the top 1 percent, work that he's done with his colleague Emmanuel Saez at the University of California-Berkeley.

He is here today to discuss his new book, which is very heavy and I recommend if you want to do weightlifting, *Capital in the Twenty-First Century*. I also strongly recommend it because I actually found it very funny and incredibly well written.

So with that, I would like to introduce Thomas.

[Applause.]

THOMAS PIKETTY Thanks a lot for inviting me, and it's a great pleasure to talk about my book today.

So let me first describe what I have tried to do in this book. This is really a book about the history of income and wealth in over 20 countries since the 19th century. It is also the last part of the book, Part Four, that talks more about the future and about possible conclusions for the future, but let me say right away that you can perfectly disagree with everything that is in Part Four and still find some interest in what's in Parts One, Two, and Three. Most of the book is really about the past history of income and wealth, and just like everybody, I am better at

analyzing the past than the future. Ultimately, the objective of the book is not so much to make predictions about the future but to help everybody to write their own Part Four. I don't pretend that my own conclusions are particularly convincing or interesting. I tried to do my best to draw the conclusions that strike me as the most reasonable ones.

What the book is really about is I tried to put together a large collection of data and historical evidence on income and wealth, and although the book is single, also I should say that this is really the outcome of a collective research process, an international research process. Over 30 scholars from over 20 countries were involved. I started working on the history of income and wealth inequality for the special case of France more than 15 years ago. Then I was very lucky to meet Tony Atkinson who did similar work for the UK. With Emmanuel Saez, we did it for the U.S. With Facundo Alvaredo, we did it for Argentina and Spain, with Abhijit Banerjee for India. I cannot quote everybody, but it has become a very large international project and I think by far the largest existing international database in the historical evolution of inequality. This has come from this many scholars, and there is no way I could have collected all this data by myself.

Also, I think I am benefiting from—and we are all benefiting from—the rise of information technologies, which make it much easier to collect such a vast volume of data, which at the time of Kuznets in the 1950s, who was one of the first also to try to compute estimates of income distribution, and we found this big decline in income inequality in the U.S. between 1910 and 1950. At that time, information technologies were, of course, much less developed, and it was much more difficult to do the same work for so many countries that we were able to do.

So all what this book is doing is to try to present all this body of historical evidence in a consistent manner, and I want to be modest about the conclusion. I certainly don't have the kind of deterministic view of the future that I sometimes read in the press release about the book. I certainly don't have this apocalyptic view of the future that some people seem to have when they read my book. I think there are several possible futures. It all depends on the kind of institutions, educational institutions, monetary institutions that we choose. There are different forces pushing in a different direction, and the objective of the book is just to see what do we know in the end about the trends for income and wealth in the past and does that help us to better understand some of the challenges for the future.

The book is about the U.S., about Europe, about Japan. It's also about every country in the world, including India and China, for which we could gather historical data. I guess as the center of the U.S., as the U.S. debate tends to be, which is very natural, so as the book refers to the rise of top managerial compensation in the U.S. over the past 30 years, which is an unprecedented evolution with between two-thirds and three-quarters of aggregated economic growth going to the top 10 percent and mostly to the top 1 percent of wealth capacity in the U.S., and this reflects, to a large extent, this unprecedented rise in top managerial compensation. This is very important, and I think this is not going to change just by magic. I think income tax progressivity at the very top end is probably one of the only ways of trying to calm down this process.

But I am not going to talk too much about that today, because the book is really trying to shift the attention from the issue of rising top managerial compensation, which his very important. I don't deny it. But it is trying to shift the attention to the issue of wealth accumulation and wealth inequality, because I think in the long run, it is probably even more important than the rise of top managerial compensation. I mean, both are important. I don't want to choose. The book talks about both evolution—and of course, they can feed each other in several ways, but what I would like to focus on in this brief introduction is really another process going to wealth-rising inequality, which has more to do with the dynamics of the concentration of capital ownership and the dynamics of wealth inequality.

The key historical force that I study in the book in that respect is the tendency in the long run for the rate of return to capital to be higher than the economic growth rate, and I argue that this force in itself, other things taking—other things being given, can very well push toward rising wealth inequalities and probably a level of concentrations that could return to the extreme levels that we have observed in the past; in particular, in European societies until World War I. And I think the primary mechanism to understand this very extreme level of wealth concentrations that we had in the past is really the fact that until World War I, it was of use for everybody that the rate of return to capital was bigger than the growth, because the growth rate was pretty small. Before the Industrial Revolution, the growth rate was almost zero percent, so of course, the rate of return was bigger than that. If you open any novel by a journalist, whoever you want, you will see that the typical return to land capital is 4, 5 percent per year, so in other words, the value of land is typically 20 or 25 years of annual rent to the land. And this is how views that the novelists of the time go from capital to rental, return to capital, and as they move between the two dimensions, the capital is starting to flow all the time. And it is of use for every reader that if you want a rent of 1,000 pounds, you need a capital of 20,000 pounds. It is sort of completely obvious. Growth rate at that time was zero percent, so of course, the rate of return was a lot larger than the growth rate.

Now, the Industrial Revolution has changed this a little bit, but much less so than one might have thought, because the growth rate went to zero percent to 1 to 2 percent per year. If you look at productivity growth now, this is a big difference. It is a big difference to grow at 1 or 1.5 percent per year rather than zero percent, but that is not enough to counter the fact that if the rate of return is, on average, 4, 5 percent, and for large portfolios, it can be 6, 7 percent. This is going to push the wealth, a very high concentration—the level of concentration of wealth will eventually converge at some finite level, because in the life of a family, wealth accumulation, you always have strange events happening. Some families over-consume the wealth. Some go bankrupt. Some have too many children. Some have too few. The life of family is complicated, and then this creates—you always have some mobility in the wealth distribution, but the level at which wealth rates of concentration will stop will involve potentially a very large wealth inequality, or at least these are the explanations that I propose in the book to account for the fact that wealth concentration in Europe and societies and even for worldwide was amazingly high.

Now, during the 20th century, a number of very unusual events occurred, which changed this inequality between the rate of return to capital in growth rate; first of all, World War I, the Great Depression. World War II, of course, reduced the private rate of return to capital for a very long time period, particularly in Europe and Japan with all the destruction of wealth. Inflation was also a way to destroy the private wealth that had been put into public bonds in the post-war period.

The other unusual event that goes with the war period is the very large growth of the post-war decades, and some of it, some of the very large growth of the '50s, '60s, '70s has certainly to do with the fact that particularly in Europe and Japan, these countries had to catch up with the U.S., and also marginally, the growth, including in the U.S., was not as large as in the 1945 period that it could have been without the wars and shocks.

The other unusual event and more positive, if you wish, event that you have in the 20th century, unprecedented population growth, huge population growth with the baby-boom growth, and more generally, it's important to understand that population growth first is a very big part of total economic growth, historically. If you take it at the world level over the past three centuries, the growth rate for world GDP has been 1.6 percent per year over the past three centuries. Half of it is population, 0.8; half of it is per capita GDP. Now, this can seem a very small number, but in fact, when this accumulates over a long period, 0.8 percent per year was enough to multiply the world population by 10 over the past three centuries and average living standards also by 10. So this can seem small, but in fact, that's quite larger when it goes over a long period, and population growth is a big part of historical growth. It is the same right now at the world level. When you look at the world GDP growth rate in 2014, you are going to get 3, 3.5 percent. Half of it is population growth.

So the population growth is not over yet. We are still at the end of the democratic transition, but according to available projections, that is going to decline, and that is one of the key reasons why we are returning to a rate of return to capital that is structurally larger than the growth rate in the recent decades, and that is pushing toward rising wealth inequality. The simple mechanism is that with a bigger r minus g's and difference between the rate of trends of growth rate, ensure wealth inequality tends to amplify, until the point where you have the short in your family wealth trajectory, but this tends to lead to high concentrated wealth.

Let me make two points about America versus Europe in that respect. I think there is a strong belief in American exceptionalism related to inequality. I guess many countries in the world have a strong belief about their exceptionalism, but it's certainly particularly stronger here. For a long time period, there was this view among American sociologists that America was characterized, among other things, by an incredibly high rate of mobility or more mobility than Europe and less reproduction of economic positions in Europe. I think for a long time, this was indeed true, and this continues to be true to some extent if we look at the relative importance of inherited wealth and labor income, but that is due to a very particular reason, which is a huge population growth that characterizes the U.S. or including now as compared to Europe and Japan. This per se, the population of the U.S. went from 3 million at the time of American

independence to 300 million today; whereas, the population of France was already 30 million at the time of the French Revolution, and it is 60 million today. So France, it is almost the same country today. It is almost the same. The families are all the same. Not the same buildings in Paris, but you have a sense of reproduction. Of course, when you go from 3- to 300 million or from 100 million in 1900 to 300 today, wealth coming from the past has to be less important than in a country with the most stagnant population. So it is a very important difference, and that is going to be with us for some time.

Now, is that going to last forever? Is the U.S. population going to be 900 million one century from now? Maybe yes; maybe not. We don't know. It is a complicated issue, but whatever happens, this will have strong consequences on the structure of American inequality and American wealth. My best guess is that population will stabilize pretty much everywhere, and therefore, the rise of the wealth-based societies that we now have in Europe and Japan might be a global phenomenon. But of course—I don't know. It could be that you will still have a lot of population growth in the U.S. because the entire world moves to America. This is certainly what U.S. universities would like, but at some point, if everybody moves to America, you will have the same problem at the level of America. It is hard for me to say that to an American audience, but I think what makes America exceptional also makes it not generalizable to the rest of the planet. I mean, I love America for that reason, but still, it is not—in a way, what we can learn from France or from Europe or from Japan, it is easier to generalize with the rest of the planet, because it is unlikely that the world population is going to be multiplied by 100 in the next two centuries, but we will see. I don't know. If you want to reduce the importance of inequality and wealth accumulating in the past—please, have a lot of children. This is the best way to—you know, if everybody has 10 children, of course, you should not count too much on inheritance. Apparently, it is moving in this direction. In a number of countries, we are moving in the direction of declining population, and this is quite frightening. I just want to emphasize that this is frightening in itself, but this has also the consequences for the structure of inequality. If each family has only one kid, then you enrich from both sides or from zero sides if both parents are poor, and this makes the relative importance of inheritance.

Right now in countries like Germany, Japan, China—the important countries have observed the size of the generations that are born right now are 30 percent smaller than the generations of their parents, and this is not twice as small, but we are getting there. Potentially, this can make the relative importance of wealth and income even higher than in 19th century Europe.

Let me also mention that I have read in a number of places that pre-World War I European societies, there is not so much to learn from there, because this is where agrarian societies, tagging on society. Let me make the opposite point, which I think there is a lot to learn from the strategy of the pre-World War I period, because this was actually a time of very large innovation, economic innovation. This is a time where we invented the automobile, electricity, the radio, the transatlantic steam. So you know this is less important than Facebook, of course, but still these are significant innovations, and there was the stock market capitalization in London or Paris at that time, as the fraction of GDP was higher than what it is today in the United States. So this was final [?] at its best. The net foreign asset position of Britain and

France were between 1 and 2 years of GDP. You don't have any country, apart from small oil countries that have such large foreign assets today. So this is not an agrarian economy in any meaningful sense.

Still, even though you had all this innovation and all this industrial growth, the growth rate of productivity was still 1, 1.5 percent per year, and this is already quite fast, because 1, 1.5 percent per year over a 30-year period over our generation, it means that output per head rises by 30 to 50 percent, so between one-third and one-half of the economy is being renewed each generation. This is actually quite fast. It is not fast enough to counteract the fact that the rate of return, the 4, 5 percent, is going to be bigger than the growth rate.

I love innovation and productivity growth, but I think it would be a mistake to believe that this per se is going to bring the growth rate to 4, 5 percent and up to the rate of return to capital. There is no concluding resistance. (I didn't look at all at the time, but I guess I should stop.) There is no natural force of any kind, and there is no logical reason or no historical reason why the rate of return to capital and the growth rate should converge to one another. There is absolutely no reason. Of course, it could be by an incredible coincidence that the number of children we have and the number of innovation we make each year push the growth rate to 4, 5 percent to the rate of return, and maybe we will discover a planet at some point where the growth rate is always 10 percent per year. But I think it will not be reasonable to bet on that. If this happens, if technological progress in the future is so fast that growth rates go up to 4, 5 percent and equilibrate the rate of return to capital, then that is fine. Then we will not need to worry about rising wealth inequality, but I think it would be reasonable to make plans for other options.

Right now, the top of the wealth distribution not only means U.S. but also in Europe, and at the entire world level, it is rising two to three times faster than the size of the world economy, in spite of the very fast rising of the size of the world economy. World GDP right now is rising at 3 percent, a bit more than 3, 3.5 percent per year. Half of it is population. Half of it is rising per capita income. Per capita wealth is rising a little faster, about 2 percent per year, but the top of the distribution, if you use the global rankings of billionaires published by *Forbes* magazine, which I don't claim is a particularly reliable source, but at least we live at a time where people are very fortunate to have information about wealth, I would prefer the government's statistical publication or some type of growth publication, but apparently doesn't find information in it. If we use this, the global billionaire wealth rankings, what we find is that the top of the distribution has been rising at 6, 7 percent per year over the past three decades or three times faster than average wealth in the world. So in spite of the convergence between the bottom and the middle of the world distribution due to emerging countries and China, the gap between the top and the middle is increasing. Nobody knows where this will stop, but I think it will be a mistake just to assume that by an incredible coincidence, this will stop at the level that is compatible with the proper working of our democratic institutions.

Let me stop there, and I will be very, very glad to answer questions and discuss these issues with you in a minute.

[Applause.]

CHRISTIAN DORSEY: So we are now going to have our panel come up and take their positions. I do want to alert you all that after this event is over, you will be able to purchase a copy of *Capital in the Twenty-First Century* as you exit the suite and once we get everybody in position.

HEATHER BOUSHEY: Wonderful! So thank you. Thank you so much for those remarks. It just definitely was very fascinating. Looking forward to having a rich conversation here. Going to spend a little bit of time allowing our panelists to discuss the debate and then we'll bring Thomas in and give your voice a few minutes to rest and to process all of that.

Allow me to introduce my esteemed panel here. To my left is Professor **Robert Solow**. He is Institute Professor of Economics Emeritus at MIT. Professor Solow also served as a Senior Economist for the Council of Economic Advisors during the Kennedy administration and was awarded a John Bates Clark Medal in '61 and the Nobel Prize in 1987. It is just a treat to have you here today, Bob.
Then to my right on the other side of Thomas is **Betsey Stevenson**. Professor Stevenson is a member of the Council of Economic Advisors. She is currently on leave from the University of Michigan's Gerald R. Ford School of Public Policy and the Economics Department. It's a real pleasure to have someone from the administration here today, and I know that you all care very deeply about inequality. Looking forward to hearing your remarks.

And then finally, of course, we have **Josh Bivens**. Dr. Bivens is the Research and Policy Director here at the Economic Policy Institute. He is the author of *Everybody Wins Except for the Most of Us: What Economics Teaches About Globalization* and is a quite prolific policy thinker here in Washington, D.CS. So thank you all for joining us.

Bob, I am going to throw the first question over to you. You, of course, named a growth model. You are a world-renown expert on economic growth, and Thomas' book has given us a lot to think about in terms of the intersection between inequality and growth and this relationship between the rate of return and economic growth. I would like you to tell us what your views are reading this and what the likelihood that the rate of return on capital will remain above the rate of growth, as Thomas suggests.

ROBERT M. SOLOW: Sure. Thanks.

Let me begin by saying that like, I suppose, most people here, I thought Thomas' book was both important and fascinating. Strangely enough, in my own mind, I seem to agree with him about what the two important contributions of the book are. One is the sheer collection and presentation and analysis and description of this vast database across time and space. I think we are going to be digesting that for a long time. The second and the most important analytical contribution is to have uncovered this mechanism that works off of the excess of the rate of return on capital, over the rate of growth of the economy, to siphon income to the very top

part of the income distribution. So far as I know, nobody had ever fastened on that before, and I think it's an extremely valuable contribution.

It's not, you will notice, some kind of market failure of a capitalist economy. It is a mechanism that is there. There is a graph in the book which shows that in Britain and France—there is no comparable picture for the U.S., actually—the rate of return, the realized rate of return on wealth is trendless over a period of well over a century, ranging between 4 and 6 percent or 3 and 7 percent, depending on how wide you want to cast that.

Most of us will have thought of that trendless character of the rate of growth as being the outcome of two opposing forces, diminishing returns over time, as capital accumulates, tending to drive the rate of return down and technological change or productivity increase generally tending to push it back up, and historically, no inevitability about this, there has been in the main industrial countries no pronounced prolonged trend in the rate of return.

Now, as Thomas explains in the book and explained just now, there is reason to expect over the next half a century or century—I don't know how far ahead one wants to try to look—when you get to be 90 years old, the horizon tends to narrow a little bit.

[Laughter.]

ROBERT M. SOLOW: But he, like the rest of us, thinks of the rate of growth, as for these purposes, exogenous. There is the demography. There is the population growth, which he expects to decelerate, to slow down. There is the rate of growth of productivity, of total fact of productivity, let's say, which no one knows about that. There are some economists, Bob Gordon being the most notable one, who are definitely pessimistic about that, and Thomas is sort of on that side. I am agnostic, but certainly, that pessimistic outlook could certainly be true for sure. So we expect the rate of growth perhaps over the next half century to be on the low side.

The rate of return on capital is endogenous. That is not something that you can treat as given, and so one wants to make some guesses as to what's going to happen to the rate of return over the next half century and what's going to happen to that critical gap between r and g, between the rate of return and the growth rate.

Well, now, on the pure theory side, the sorts of influences that appear in the book suggest that there will be an increase in the capital output ratio or the wealth output ratio. This is likely, if the law of diminishing returns is still operating at all—is likely to push the realized rate of return on capital down a little bit. You can ask how much down. If you make the technical calculations that one would normally—that a person like me would normally make and that Thomas—that rest on assumptions that are already in Thomas' book, you would expect the rate of return on capital to fall when the growth rate, when the permanent growth rate falls, and to fall somewhat better than 1:1, so that the gap between r and g is likely to remain positive but

to be somewhat narrower. So there is no reason there to expect this process of accumulation of wealth and income at the top of the distribution to stop concentrating, to stop increasing.

But I want—I'm going to quit in a minute. I want to call attention to one other aspect of this that's not discussed in the book, and there's no reason why it should have been discussed in the book. It's not a book about that. You would normally expect the combination of a lower rate of growth of the economy and the lower return on capital to diminish the incentive to do real investment in an economy. If income continues to be concentrated at the top, you would expect, if anything, the saving rate in the economy to rise. So I suspect that this kind of development is going to make it harder over the next 50 years to sustain the amount of investment that's necessary to maintain full employment in an economy like ours.

Without meaning to, I think that Thomas has produced as strong an argument about the worry of stagnation over the next 50 years or so than a stronger argument than those who have promoted that argument have themselves produced. The one gap that I'd like to see filled if there's going to be a follow-up to this book is I'd like the analysis of the rate of return in the U.S. to be worked out in detail as it is in Great Britain and France, because I think that the prospects for the next 50 years or so are not so good distributionally—we may come back to that discussion later on—and on top of that add a level of difficult to maintaining full utilization of the economy, generally.

Thank you.

HEATHER BOUSHEY: Thank you, Bob. I am going to come back to where you ended in a second when I get to Josh, but I want to go to Betsey.

Betsey, I wanted to throw you a question that pivots a little bit off of what Bob says, but it takes it in a slightly different direction, which is that—so Thomas suggested that if the rate of return is higher than the rate of growth; therefore, we need to tax capital. And we will get to that in a little bit, but for now, that sort of presumes that we can't do anything to change the rate of growth, and Bob has made some points here. From your perspective, where you sit in the administration, what is your view on that?

BETSEY STEVENSON: So I am really glad that you asked me that, and actually, it dovetails really nicely with where Bob ended, because I think being concerned about fully utilizing the labor force is something we should in fact be focused on, and in fact, the administration is focused on. And that has many dimensions to that challenge of fully utilizing the labor force.

One of the things that the administration is focused on right now is increasing opportunity for women, and the White House is holding a Working Families Summit. The philosophy behind that is the idea that we're not making good enough use of American talent, and I think if you think about where this administration has been from the beginning, it's been trying to think about how we can do more to help get workers where they are going to be best used.

One example of this is, obviously, the health care bill, the ACA. By eliminating job lock, by allowing people to be able to access health insurance through the exchanges, we have undone I think one of the important tethers that meant that people were misallocated, and so letting people choose jobs where they're going to be most productive, where they're going to be happiest instead of where they're going to actually get insurance is important, but of course, we can't stop there. We know that there are other things that we can do in order to help women be able to make choices about participating in a labor force that are really about their talents and where their talents are going to be best utilized.

This idea that we need to do more for the—[audio break]—also drives our concern about the long-term unemployed. We can't afford to have a group of people who are taken out of the labor force and are never participating fully, so trying to figure out how to get the long-term unemployed back into the economy and being utilized in the—being able to contribute in a way that they were contributing prior to becoming unemployed is obviously an important set of policy concerns.

A third set of concerns is thinking about the role of young minority men, many of whom have become disconnected from the labor force, and the President has an initiative called My Brother's Keeper in trying to make sure that we are improving the opportunities for young men of color who have often found that they get into—who have found themselves in situations where they are not getting the same kind of opportunities, and so that kind of public-private partnership to improve opportunities for them. All of that is really around a set of policies designed to make sure that we're doing as much as we can with the labor force.

Another set of policies in terms of labor force growth is thinking about immigration reform. The CBO and the administration has pointed out that immigration reform would increase growth. Again, if you are thinking about the rate of return of capital, when the rate of return of capital is greater than growth, we end up in a situation where inequality is growing. Obviously, trying to boost g is important, and I think more generally, one of the things I wanted to say is I think we are seeing research that is really fundamentally shifting in the way we are thinking about the relationships between growth and inequality, so how they are talked about, how for many decades we were sort of told growth is important because a rising tide lifts all boats, and we have all become a little bit disillusioned without seeing that a lot of the gains have gone to the top.

I think this book is terrific for having us rethink that relationship between inequality and growth, and it's worth putting it in the context of other research that's come out; for instance, research from the IMF suggesting that the policies that might reduce inequality are more benign for growth than people used to think; and additionally, other research which has indicated that countries that have less inequality actually have more sustained growth. So I think all of this research is coming together to tell us that we really need to rethink the relationship between inequality and growth, that growth is still important, and we need to be adopting growth-promoting policies, but that we shouldn't see growth as in conflict with

inequality. In fact, addressing inequality can foster growth, and fostering growth by potentially raising g above r can actually help prevent inequality from rising further.

HEATHER BOUSHEY: Thank you, Betsey. That was a nice—I like the way you brought in the IMF study, which I think is so important for its intersection with Thomas' work, so thank you, and we'll come back to that I think in a little bit as well.

Josh, I'd like to turn to you for your sort of opening reaction to Thomas' book. I wanted you to focus on—I'm sure you want to talk about the full employment angle here, given the work that you do at EPI, at the Economic Policy Institute, but also, sort of, what are some of the policy levers more generally that you think are really important to consider, given what we're learning from this book?

JOSH BIVENS: Yeah. Thank you for having me on this panel, and thank Thomas for coming and for the—[audio break].

The way I think about this—and I think about this in a pretty unsophisticated way—one of the big takeaways from the book is bad things happen when r is greater than g, when the rate of return to capital exceeds the growth rate, and bad things happen mostly because capital income and wealth is already very concentrated, so when the rate of return to capital exceeds the growth rate, you just sort of have this snowball effect of ever-greater inequality. So that again, the unsophisticated take on this is three things to worry about here. How do we make sure more people get to enjoy a high rate of return on capital? I mean, if capital is completely distributed equally throughout the economy, r greater than g, not a problem. So the first thing is expand the universe of people who get to enjoy the—[audio break]. Two, try to raise g, try to raise the growth rate; and then three, how to lower the rate of return on capital if all that the rate of return on capital is doing in some sense is sort of shifting rents away from the vast majority to sort of a privileged group at the top, so just a couple comments on each of those things.

In terms of who gets to enjoy the rate of return on capital, we should do lots of things to make sure wealth is distributed more equally. You can think like complete pie-in-the-sky, ambitious things like a financial transactions tax that finances a national wealth fund that sort of gives everybody sort of a big share in national wealth. That would actually have a side benefit. You could imagine if you had a national wealth fund, kind of like the Alaska Fund, but that instead went around and invested in asset markets around the world. You could actually reduce r in a socially useful way, because you would be kind of pounding down the equity premium, and you would be giving more and more people the benefits from a high rate of return on capital.

The shortest and easiest route to boosting people's wealth is ensuring there's enough good jobs available, that they earn a wage high enough to have a decent standard of living and save a little bit on top of that.

So the next question of how to raise g, which dovetails with that, the first thing we have to do to boost g is not completely botch macroeconomic management; that is, we need to get the economy back to full employment much sooner rather than later. Economists like to say, "No, no. The g Thomas is talking about, that is a long-run supply-side thing." You know, we've thrown away about 7 years in the U.S. economy by not ensuring a full recovery. Japan probably threw away a lot more than that by not engineering a full recover from there in 1990. So we should at least get that part right, and we're not getting that right. And we're mostly not getting it right—really, to name names, we're mostly not getting that right because Republicans in Congress are just obsessed with austerity and are strangling sort of all efforts to sort of engineer a full recovery.

The other thing we can do to raise g, which is—it's tough. That's not a very policy-amenable variable in a lot of ways. One other thing besides what Betsey talked about, reverse the big decline in public investment we have seen over the past generation. If you look at the 10-year trajectory for public investment, not just in the Ryan budget but in kind of every budget out there, except for the Congressional Progressive Caucus, we really are cutting public investment to the bone. So one thing that we can do to boost g is not let that happen, to actually boost public investment.

Then the last thing, how to lower the rate of return on capital, I think too many reviews of this book sort of think that Thomas has identified an absolute iron law of economics that cannot change; r is what it is, and everyone has to adapt to that. But even in his book, he notes that we are able to sort of shove r and g much closer together in the United States for most of the post-World War II period, and I would argue we did that mostly because we took a lot of conscious policy decisions to make sure income did not concentrate. Progressive taxation is one that Thomas talks about a lot, but there is a whole menu of things we did over that time period that generally boosted the bargaining power of workers up and down the wage distribution and allowed them to have some bargaining power, not just against capital owners but also against what Thomas calls the "super managers." We had effective unionization. There is enough density that you actually had bargaining power for lots of workers. For 30 years, the minimum wage actually kept pace with productivity growth, not just inflation. We really tightly regulated our financial sector. We did not just let them sort of take on lots of risk and pretend to be managing it but really just hide it and sort of claim an ever-larger share of national income, while not providing much in the way of useful services. And I think related to the power of finance; we actually had macro policymakers who put a much higher weight on very low rates of unemployment than they did on very low rates of inflation. Basically, I think we just need to look up all of those levers that actually gave rank-and-file workers some real bargaining power against both capital owners and the super managers and think about what we can do to boost that bargaining power again.

So I will just end really quickly. The punch line is we should really try to push r and g closer together. We should make sure wealth is not so concentrated, and I will say we have to think creatively about it, because I think that the policies that go to the top of the list for pushing r and g closer together from his work, they look at little different to me in Europe than the

United States. Most of the story I have been telling is really about the rate of return in the corporate sector, and that is what is driving a lot of it in the United States. In Europe and Great Britain and France, there is a huge housing wealth component that has a whole range of policies that we should probably talk about as well.

HEATHER BOUSHEY: Thank you, Josh.

So there are so many—I have written down like 22 threads I want to follow up on, this is what happens when you think about Thomas' book, but let me start with the one that I sort of take a different tact here, just to get us started on something we haven't talked as much about.

One of the things that I found so interesting about the book was the title, *Capital in the Twenty-First Century*, and kind of thinking about the fact that, Thomas, you took us back 2,000 years and made the argument that we could look at capital. And you talked a little bit about this on the podium, that we could look at capital over this very long time period. We didn't have to look at capitalism as a separate, different mode of production, shall we say. I thought that was very interesting, because there's a lot of implications that come from that, and one of them is sort of thinking through what a renter class means. And you focused on how that was really the super managers of today.

But I wanted to actually throw to the panel—you know, my first reaction as I read the first 20 or 30 pages and I realized what you were doing was like, "Well, wait a minute. Can you do that? Wait. Can we let go of thinking about capitalism differently than other forms of—[audio break]—economy? And what does that mean for our thinking about how the economic works?

So I wanted to throw to the panel, just to start us off on a little bit of a philosophical question, go in reverse order or who wants the question, but start over there with Josh for a few remarks, and then I have a follow-up in terms of the actual definition.

JOSH BIVENS: That's a big question. Yeah. There is something hugely useful in sort of stepping back and thinking of capital not just as the machines that we work with and the buildings we work in, but as sort of just a command over economic resources. Clearly, there have been groups that have had a privileged access to the command over economic resources for a really long time.

I would say I don't want to throw out capitalism as a unit of analysis totally, because I do think, especially, the historical data in the book is so fascinating, but there really is something incredibly different pre- and post-1940. Basically, between discovering Keynesian economics, discovering you can actually fight the business cycle, and sort of having across a lot of the western world some actual expansion of the franchise and people actually expect a rise in living standard from their government, I feel like if you go back too far, you can kind of mislead yourself into how applicable that part of the data series is to today, so that's the one thing that comes to mind. To me, the debate over economic policy in a way that sort of rings familiar to me kind of begins with 1940.

HEATHER BOUSHEY: Interesting. Bob, would you have a comment on this?

ROBERT M. SOLOW: Yeah, but it will be a negative comment. I'm constitutionally against big questions.

[Laughter.]

ROBERT M. SOLOW: I like to get the little things right before we come to the big questions, and I am a little worried about the discussion so far. I think it makes it sound too easy to solve Thomas' problem. A lot of the policy things that we'd like to do are not influences on the rate of growth. They are influences on the level of output. It gives you a temporary bulge in the rate of growth but not a permanent one, and it leaves you in the biggity trap in the longer run.

Secondly, it is wrong, I think, to talk about getting the growth rate above the rate of return. I said in my initial remarks that a lower growth rate probably induces a lower rate of return on capital. A higher growth rate, at least a higher growth rate of total fact of productivity, will induce a higher rate, not a lower rate of return on capital. So I think that the problem is a little more deeply embedded than we like to think.

On the question that Heather actually just grazed, the big question, there is, of course, a difference between capitalism and pre-capitalism, and namely, it's who gets the return on capital, who gets to pocket the return on capital, whatever it is. I take it as a practical matter.

Now, Thomas is a little more optimistic about this for Europe, as I think somewhat Josh maybe mentioned. This is a country that is no damn good at income redistribution. It is not about to do a lot of that. If you can't accomplish, although I like very much—and I have written about it myself a little bit, what Josh said about trying to democratize the ownership of capital, find some way to do that, unfortunately it always involves the tax system, so good luck with that.

[Laughter.]

ROBERT M. SOLOW: But we ought to be thinking—and this, I think was in Heather's mind—about mechanisms for affecting the pretax distribution of income. Are there things we can do to the market economy that will alter the pretax distribution? Democratizing the ownership of wealth is perhaps the most obvious of those and also the most difficult, but doing things which might strengthen wage growth, there is something that might conceivably be accomplished.

So I am for doing this step by step in a small way.

HEATHER BOUSHEY: Betsey, would you like to comment on that?

BETSEY STEVENSON: I wanted to comment on the point that was just made that most of the policies affect the level and not the rate of growth, and I think that is certainly something that

we are aware of. But there are certain policies. Let's take preschool for all, which is something the administration has really pushed. We know that investing more in young children will cause them to be more productive. It won't necessarily affect the rate of growth forever. Once we sort of get all kids getting the same access to skills, at some point that is saturated.

But I guess I am optimistic enough that I think while we are failing to maximize the level of growth, we should be pursuing those policies, and there is some chance that they stimulate enough innovation that raising the level can actually impact the rate of growth by changing actually who is participating and who has got the skills and what kind of innovations they come up with.

HEATHER BOUSHEY: Well, something that you said, Bob, I was lucky enough to get to spend last year in the UK where a lot of the folks I was working with talked a lot about what they called "pre-distribution," sort of thinking about what can we do before we get to the tax system. I don't know, Thomas, if you wanted to commend on this as well.

THOMAS PIKETTY: Let me say that all the policy options that have been discussed I think are really complementary rather than substitute. I think we are not going to replace progressive taxation by preschool programs and pattern flow, whatever. These are all very useful policy solutions.

So to be a bit more concrete here, let's assume we have done everything we can to increase the growth rate. Growth is good in itself, well, assuming we invent clean sources of energy, which we are not quite there yet, but assume we manage to do it. Growth is good in itself, and I am very much in favor of doing everything we can to raise growth.

Assume we have done everything we can. This is not enough. As Bob was saying very clearly, there are certainly no presumptions that raising the growth rate is going to reduce r minus g. Anyway, assume we have done everything, what are we going to do?

Here, I will be a bit more specific about the tax proposal in order to actually reduce the inequality of assets, of asset ownership. One thing you can think of doing is just to tax capital in the sense you are going to tax the rate of return to bring it down to the growth rate. That will be, I think, very stupid to do, because if you tax capital at 80 percent, so that the growth rate of return goes from 5 to 1 percent, maybe the growth rate can go from 1 to zero percent. I don't think this is it.

So what I am proposing is a bit simpler than this. I am not proposing to increase capital taxation as a rule. What I am advocating is to make it progressive. Take, for instance, what would be a progressive tax on net worth. The closest thing we have in this country to a wealth tax is a property tax. It is quite a lot of money. Total tax revenue from the property tax is large in the U.S., and they are larger in France. Also, the biggest wealth tax is a property tax.

Now, this is not a progressive tax on net worth. What I will propose ideally, if we could do that right away, is to keep the same tax revenue that we have today from the property tax, so I am not proposing that they should be doubled. You just keep the same tax revenue, but transform it as a progressive to net wealth, which will mean in effect that you will actually reduce the property tax for maybe the bottom 90 percent of the population, because most people have very little wealth.

In particular, if you have a house worth $500,000, but if you have a mortgage of $490,000, your net worth is $10,000. So with a progressive tax on net worth, you will not pay anything. Whereas, in the current system, you pay as much property tax as someone without a mortgage or who inherited from his apartment or is that many years ago. I think this is nonsense. The interest deduction does some of it but doesn't do it as clearly. I think the primary objective is not so much to increase taxation of capital but to increase wealth mobility and to increase access to wealth.

Right now, the bottom 50 percent of the U.S. population owns 2 percent of U.S. national wealth, and the next 40 percent owns like 23 percent, and the top 10 owns 75. So 2 percent for the bottom, 50 percent, this is really, really low. Even if you don't want to go the way to socialism, maybe somehow this can be increased to 5 percent, 10 percent. I don't know what should be the target, but certainly reducing the property tax on all those people who are trying to access wealth, trying to make it progressive is the way to go. Maybe people will say this will never happen. Let me just say that I am a bit more optimistic about American democracies in the sense that one century ago, in 1900 or 1910, everybody would have said that a progressive income tax would never happen, that this was impossible according to the Constitution, and indeed, that was impossible. But things happen. Sometimes things happen.

In Europe, the move to progressive taxation was largely due to the world, to the Bolshevik Revolution. In America, I think that it was more due to the working of the democratic process in a way. We don't have to be pessimistic about this.

HEATHER BOUSHEY: I don't know about you, Betsey, but I am going to take a clip of bad things happen and just put it on my computer and sort of help me, inspire me every day.

One thing that you talk about in the book that I'd like to ask whoever on the panel feels that they want to answer, you suggest that one thing we could do is actually just start tracking the money, which I thought was a very interesting proposal. I don't know, Betsey, if you guys have thought about this at all, or, Bob, if you have sort of, but is that possible? Could we sort of track what we know about wealth in a way that we aren't doing now, so that we could easily have the information to get to the next step?

BETSEY STEVENSON: So I guess the one thing I would say about that is, certainly, there's possibilities to track wealth, and we saw that with the Foreign Account Tax Compliance Act that this administration put forward. We have been negotiating bilateral and multilateral treaties

with countries to share information. If we are able to track it as it leaves the country, then surely this is not an impossible task.

HEATHER BOUSHEY: I like that.

I want to switch over to a slightly different topic but one that we have talked about a little bit. One of the mechanisms through which the rate—you see the rate of growth kind of continuing to increase is through inheritances. It is through, the way I have been thinking, the calcification of these income flows that we talk about a lot here in Washington into actually the stock of wealth. For me, that was one of these—you know, we talk a lot about inequality. We talk about wealth inequality, but I haven't seen a lot of conversations about how high-income inequality actually concretely translates into increasing stocks of wealth for some people. Really, we are looking then at the flow, not just this sort of point in time. We don't talk about that as much.

So I wanted to spend a few minutes essentially talking in some ways about mobility, but also how we see inheritances playing out in different ways in the U.S. economy.

Actually, Betsey, I know I just went to you, but I wanted to go to you first on this one as well. We think of inheritances a lot in terms of money, but increasingly, I think there is a lot of economic evidence about other ways that we are passing on inheritances to the next generation. I know you have done some research on this.

BETSEY STEVENSON: Yeah. The administration is definitely focused on this issue of opportunity for all, and one of the things that we are seeing is high-income people are able to make investments in their children that lower income people aren't able to make, so coming back to the idea of preschool for all. We know that higher income people are able to put their children in high-quality day care and high-quality preschool and high-quality school and good colleges, and their kids are able to graduate with less debt. You can see all the way through the spectrum of opportunity. If you are lucky enough to be born to wealthy parents, you are going to be—you are much more likely to be heavily invested in, and we need to make sure that that kind of asymmetry increases inequality, even if we are really allocating things on a merit-based system, because we are putting all these skills into our higher income kids.

One of the things that really struck me when we were talking about the minimum wage debate, we need to raise the minimum wage, and as many of you know, the President raised the minimum wage for federal contractors. One of the arguments for raising the minimum wage and why it doesn't have the kind of negative impact on employment that standard economics tells you it could have, I think one of the reasons that it doesn't is because workers, when they are paid more at the bottom become more productive, and that undoes some of the excess cost.

One of the things I liked about your book is it goes back in time, and when I start thinking about raising the minimum wage, I went back and looked at Marshall who said you have to pay

people enough that they can eat proper meals. You'd think that when we were talking about 2014 in the United States, people can eat enough. Actually, you should look at the research. I guess people at the bottom show that we see over the course of the month, their caloric intake drops as they run out of SNAP, as they run out of the government services. We also see an increase in hospitalizations for hypoglycemia over the course of the month as people become more food-deprived. When people are food-deprived, we know that they are really income-constrained in really important ways.

One of the things I was saying to Heather is I am very curious even how this plays out in a prenatal context, because there is also a lot of research that shows if you are not getting proper nutrition during your pregnancy, there is lifelong consequences for the kids, and we look at people at the bottom, and we see that they run out of calories as they get towards the end of the month. And if that's happening during pregnancy, that is another source of inequality. So there's lots of ways in which not having enough income at the bottom perpetuates inequality, and this is behind why the minimum wage is such an important foundational part of expanding opportunity for the President.

ROBERT M. SOLOW: Could I just add something, add something to that?

HEATHER BOUSHEY: Yes, of course.

ROBERT M. SOLOW: I think that Betsey just made a very good point, and it fits into the rest of the discussion in this way. We have talked a little bit about how it would be a good thing but a very difficult thing to make the distribution of wealth, of capital, more equal, but what she is talking about now is a way of making the distribution of human capital more nearly equal, and that is a very valuable thing. And it is definitely worth doing.

Thomas, God help him, doesn't talk much about human capital. The book would not be carry-able if—

[Laughter.]

ROBERT M. SOLOW: But now I also want to add a pessimistic point. You would think if you wanted to reduce the influence of inherited wealth on the society that the most direct way to do that would be through an estate tax. This is a country that cannot even sustain a viable estate tax. Okay.

[Applause.]

HEATHER BOUSHEY: We have some fans of that there in the audience. It is certainly true.

I actually want to pivot up what you just said, Bob, about human capital to then throw it—I mean, Thomas does spend some time in the book talking about human capital, and for the most part, there is a section where you do talk about it. You talk about how we are not seeing

at the very, very tippy top of the income distribution that these very high salaries being paid are actually due to an increase in the marginal productivity of that human capital at the very top, but that it looks more like rents. There has been some economists, many economists, who claim that rising incomes from the top reflect the rising value that these super stars whose skills and talents that are so special and so unique are reflected in these very large salaries, but you basically say that's not true, this is rents. I wonder if anyone on the panel—Bob, would you like to—

ROBERT M. SOLOW: I think that's a very good point, and I would go even further. I have been puzzling about Thomas' remarks about super managers, and the more you get to know super managers, the less you believe in their marginal productivity.

[Laughter.]

ROBERT M. SOLOW: But I wonder whether in fact there is not a case for regarding a large part of that income as income from wealth, as a form of profit sharing. You ask why that, why the executive, why give a fraction of the income thrown off by capital to the CEO, and there, I think it's the Lake Wobegon Effect, fundamentally. I cannot imagine a compensation committee that says to itself, "Well, our guy is somewhere down in the bottom quartile of executives, so why don't we pay him at the bottom quartile of executive"—it's not in the capacity of a compensation committee to say that to itself, because it would have to say we should get rid of him and get one at the median at least.

I wonder if part of the paradox is not that substantial fraction of those high—what Thomas calls "super manager" salaries—are not functionally a return to wealth rather than a return to labor.

HEATHER BOUSHEY: Thank you. Josh, do you want to comment on that?

JOSH BIVENS: Yeah. Just a couple words in support of that. One, just as a sort of accounting matter, a lot of what gets called "labor compensation" in sort of the IRS data that Thomas—it is stock options and executive bonuses that are clearly very linked to capital performance. The fact that they show up on a W-2 form means they show up as labor compensation and all that, but I think it is totally right that they look very capital-like in that regard.

Then I would just say I think it's even worse than Bob said in terms of CEO pay. It is not just that the compensation committee can't admit they have a below-average CEO. They seem unable to construct pay packages that even prospectively would pay them for performance. I mean, they are always gamed. CEOs benefit from sheer luck. They benefit from stuck prices that go up in their industry, not in their firm, relative to other firms in the industry. They do all sorts of things that actually consciously delink their own CEO's performance from the firm's—or CEO pay from the firm's performance, so I think it's even worse than that.

HEATHER BOUSHEY: Oh, and there again was a nice piece on this in last weekend's paper that sort of talked about some of those pieces.

We have about 10 minutes. I have some questions here from the audience that I am integrating, and I have two big things that I want to touch on before we end. Because we are here in Washington and we want to think about policy, one of the things that I think was especially interesting for me thinking about policies that come out of the book is that while in many cases when we think about what went right in the post-World War II, those decades, a lot of times—now, of course, I am a labor economist by training, so maybe this is just me, but a lot of times when you think about what went right, you think about the policies that gave workers and their families something. You think about the Social Security Act. We think about the Fair Labor Standards Act, which we are celebrating the 75th anniversary of this year. We think about the Wagner Act. We think of the policies that actually gave workers power and money, and we think about unions. We think about sort of this side of the equation.

And for me—and I want to pose this to everybody on the panel—what the book really pushed me to think about was, okay, well, we think about a lot of the policies for the bottom and the middle, but what should we be really thinking about in terms of the top, and have I been misdirected all this time? Should I have really been thinking about the r and the g, and how should we be thinking about this in terms of our policy agenda?

So I'd actually like to start with you, Josh.

JOSH BIVENS: So quickly, I don't think you have been misdirected, but I do think what the book shows is, all else equal, one person's income is another person's cost, and so if what you are interested in is boosting incomes for the vast majority, that income is going to come from somewhere. I mean, maybe you can claim we are going to do something that is just going to make productivity go through the roof, and we will direct all that to the bottom. More than likely, it is going to come from somewhere else. It is going to come from the top, and so that means two things. You should be really forthright about that, and you should also realize that when you talk about things like disciplining CEO pay and actually introducing some competition to that market and re-regulating finance, it is not just beating up on rich people for fun. It is actually expanding the consumption possibilities of everybody else, so it is not just an exercise in hating the rich. It is an exercise in actually generating a fairer economy, and so you do have to look at the top.

HEATHER BOUSHEY: Do you want to comment on that, Betsey? No?

BETSEY STEVENSON: No.

HEATHER BOUSHEY: Bob?

ROBERT M. SOLOW: I don't think I have anything to add to that that hasn't been said already.

HEATHER BOUSHEY: Okay. Well, so then I will move on to one of these questions that just came in from the audience. This is a question, I think for Thomas. What do you think the

single, most worst effect of high income wealth and inequality is? If you could just bring it down to one thing.

THOMAS PIKETTY: To me, the main problem is working of our democratic institutions. I think inequality is okay as long as it's sort of within certain limits, but if when it gets too extreme, it is just—there is a serious—that the particular institutions are just captured by the top income and top group. I think pre-World War I Europe is clearly an example, and I think we should have a serious discussion as to whether we are going to be in the same situation in this country. To me, this is really the main issue.

One of the main lessons of the 20th century, that we don't need 19th century inequality to grow. The kind of extreme concentration of wealth that we had in the 19th century in Europe and countries was just not useful for growth in the sense that these disappeared mostly for tragic reasons due to the war, and this did not prevent growth from happening.

Similarly, the kind of huge rise in top managerial compensation and top inequalities that you see everywhere in the U.S., well, you see it everywhere except in the growth statistics and in the performance statistics of the U.S. economy, which has not been particularly good over the past few decades. So extreme inequality is just not useful and is leading to corruption of our political institutions, so it's just bad.

HEATHER BOUSHEY: Thank you. Would anyone else like to comment on that?

BETSEY STEVENSON: You know, one thing we haven't talked about is just overall societal well-being. So I will refer back to my own research. I have done a lot of research pointing out that a subjective well-being does rise with income, and people look at this and they say—well, a long time, I think people really wanted to cling to the idea that income, rising income wouldn't increase your well-being. And I think we have found that well-being rises with income, but it is in a percentage-based way. So when your income increases 10 percent, you've got the same kind of increase in well-being, regardless of whether you're at the top of the bottom. One of the things that points to is that if you want to maximize the aggregate well-being in society, you need actually a more equal distribution, because the amount of well-being people at the top lose when you redistribute to people at the bottom is very small compared to the amount of well-being that people at the bottom gain. So this idea of redistribution is not at all inconsistent with the idea that subjective well-being—or that people are continually made better off, even as they get more income, but if you are thinking about it from an overall society perspective, really high inequality does lead to overall lower societal well-being.

ROBERT M. SOLOW: We have almost achieved the level of theory that had been achieved in the late 18th century.

[Laughter.]

HEATHER BOUSHEY: So I will ask Josh or Bob if you have just a final remark, and then I will wrap up.

ROBERT M. SOLOW: No. My final remark is I like Thomas' book. I think you should all read it. It is very heavy, but if you rest it on something, you can read it and enjoy it. It's a really good book.

JOSH BIVENS: I'll let Bob have the last word.

HEATHER BOUSHEY: Well, thank you. I am actually very excited that we ended on this very optimistic note, both that we need to addressed these issues to save—[audio break]—but that we can grow with less inequality, and I believe it will make us happier is what Betsey just said.

[Laughter.]

HEATHER BOUSHEY: So with that, have a lovely weekend.

[Applause.]