THE BROOKINGS INSTITUTION

WEBINAR

NETWORKS OF OPPORTUNITY:
SOCIAL CAPITAL AND ECONOMIC MOBILITY

Washington, D.C.

Wednesday, August 3, 2022

PARTICIPANTS:

Welcome and Introduction:

RICHARD V. REEVES
John C. and Nancy D. Whitehead Chair
Senior Fellow and Director, Future of the Middle Class Initiative
The Brookings Institution

Presenters:

RAJ CHETTY
William A. Ackman Professor of Economics, Harvard University
Director, Opportunity Insights

JOHANNES STROEBEL
David S. Loeb Professor of Finance, Stern School of Business, New York University

Panel Discussion:

Moderator:

RICHARD V. REEVES
John C. and Nancy D. Whitehead Chair
Senior Fellow and Director, Future of the Middle Class Initiative
The Brookings Institution

Panelists:

CAMILLE BUSETTE
Senior Fellow, Economic Studies, Governance Studies, Brookings Metro
Director, Race, Prosperity and Inclusion Initiative
The Brookings Institution

ROBERT PUTNAM
Malkin Research Professor of Public Policy, Harvard University

SCOTT WINSHIP
Resident Scholar Director of Poverty Studies,
American Enterprise Institute

P R O C E E D I N G S

MR. REEVES: Good morning to everybody who is on U.S. time but, hello, whatever time it is wherever you are in the world. We have a very wide audience today tuning in from around the world. So, thank you for joining us today for this hugely important discussion on the relationship between social capital and economic mobility. We have a fantastic lineup for you today.

I should introduce myself very briefly and then get out of the way. My name is Richard Reeves. I'm a senior fellow in economic studies at the Brookings Institution. One of my main areas of work is intergenerational economic mobility. What that means in practice is that I sit quietly in my office and wait for Raj Chetty and the team at Opportunity Insights to produce another paper so that I can write about it. And we're delighted that Raj and one of his colleagues is about to speak and then we'll have a fabulous panel afterwards.

So, you're first of all going to hear from Raj Chetty himself, who is the leader of the Opportunity Insights team at Harvard University. Then from Johannes Stroebel, one of his coauthors on the recent raft of papers, who is at NYU. We're then going to hear from an illustrious panel, first of all from Robert Putnam. And one summary of work that you're about to hear about is that it's a big, big data exercise in showing that Robert Putnam was right all along. As such, I'm very interested what Bob makes of it himself when he has a chance to speak.

The two papers have just been published by Opportunity Insights and *Nature*, *Social Capital I: Measurement and Associations with Economic Mobility; Social Capital II: Determinants of Economic Connectedness*, which you're about to hear a lot more about. There are also a whole raft of associated papers at interactive socialexplorer.org, et cetera. Please fire in your questions using #SocialCapital or, indeed, keep the conversation going on social media or email events@brookings.edu.

And so, with no further ado, I'm going to get over to the main presentation, and first of all we're going to hear from Raj and then from Johannes. So, thanks again for joining us, everybody. And Raj, it's a great privilege that you've chosen to come present to us today. Thank you so much. And

Johannes, I think is first. Who's speaking first?

MR. CHETTY: I'll kick it off. Well, thank you so much, --

MR. REEVES: Yeah, thanks.

MR. CHETTY: -- Richard. And thank you to Brookings for hosting this event and thank you all for joining. So, I'd like to start off by motivating our conversation by talking about some work we've been doing in our research group at Harvard on the geography of economic mobility. And so, if you look at the map that is shown on the screen here, this map has occupied my interest and our research team's interest for the past several years. Let me first briefly describe what it shows and then talk about what I think we've learned from it and how it motivates today's conversation on social capital.

So, what we've done here in earlier work is used data from anonymous tax returns on essentially all kids born in America in the early 1980s, about 20 million children. We mapped them back to where they grew up, dividing the U.S. into 740 different metro and rural areas. And in each of those areas, we calculate a simple measure of upward mobility. We ask for children born to low-income parents, parents at the 25th percentile of the national income distribution, which puts you at a household income of about $27,000 a year. Where did those kids themselves end up when they become adults when we measured their incomes using tax returns when they're in their mid-thirties?

We color the map so that blue-green colors represent areas with higher levels of upward mobility. And red-orange colors represent areas with lower levels of upward mobility. So, if you just start by looking at the scale in the lower right-hand side of this map, you can see that there's an enormous amount of variation in children's chances of rising up and achieving the American Dream, so to speak, across different parts of the United States. In some parts like the center of the country like Dubuque, Iowa, for instance, kids who grew up in families making $27,000 a year on average are solidly in the middle class, making $45,000 a year or beyond. But then you have other places like Charlotte, North Carolina and much of the southeast where kids growing up in families making $27,000 a year one generation later, are actually making less than their parents did on average, despite the tremendous amount of growth that's occurred in the United States over the past 30 years.

So, this map has captivated our interest and the interest, I think, of many social scientists as this data has been made public because it shows that there are tremendous differences in economic opportunity across the U.S. And from a social scientist perspective, gives us a new lens to understand the determinants of economic mobility. If we can figure out what's different in Dubuque, Iowa versus Charlotte versus Salt Lake City, maybe we can learn about what drives economic mobility and expand opportunities across the United States.

Over the years, we and others have investigated a number of different explanations for what might be driving this variation. Researchers have identified factors like the rates of poverty in an area is a strong predictor, levels of inequality, the fraction of single parents in a neighborhood, the quality of schools, numerous things that seem to play an important role in shaping this picture. Along the way, lots of folks have suggested the idea that social capital might be an important aspect of what's driving this variation. Thinking of work that's been done by Bob Putnam going back many years, and conversations with Bob and many others got me got me intrigued. And partly introspection, seeing some results in other work we were doing, made me think that this might be something really important to investigate. Could we think about what role social capital might play and how it might affect economic mobility?

And so, that sets the stage for what we started out doing in this project where once we started thinking about issues of social capital, I began conversations with Matt Jackson at Stanford University, who's the leader in bringing ideas of social networks into economics over the past 20 years or so, and Johannes Stroebel and Theresa Kuchler, who have done some of the most innovative work using Facebook data to think about the role of social networks in a range of behaviors. And so, the four of us teamed up and started this project, which Johannes is going to tell you about now.

MR. STROEBEL: Great, thank you very much, Raj. So, the first part of the project that we spent quite a lot of time thinking about is trying to figure out what people actually mean when they use the concept social capital. And we have a building here on decades of work across the social sciences. Lots of it done in sociology. Lots of it done by Professor Putnam, who is going to join us later. And we distilled sort of these many notions of social capital that are out there in the literature down into three

concepts that we think we can measure relatively well in the data.

The first one is what we're going to call connectedness. It's also been called bridging social capital, among other terms. And what it is trying to capture is the extent to which within a community, individuals with different characteristics, this could be high or low-income individuals, or native or non-native language speakers, et cetera. So, to which the extent to which these people with different characteristics are friends with each other. So, that's going to be the first group of social capital measures that we'll try and measure and explore further.

The second is what we're going to call cohesiveness and it's also been called bonding social capital in the literature. Here the idea is to try and get a sense of the density of social networks within a given community. So, one measure, for example, is the extent to which two of your friends might in turn be friends with each other.

The third group of social capital measures that we're thinking about is what we're going to call civic engagement. This does not directly relate to the exact structure of individual networks, but it is rather trying to capture things such as the extent of volunteering or civic participation within a community.

So, what we do in this paper is essentially four things. The first thing is that we'll try and measure these three distinct concepts of social capital across community using privacy protected data on 21 billion Facebook friendship links. The second thing that we'll try and do in this paper, and this comes back to Raj's earlier motivation, is to try and understand the associations of these various types of social capital measures with economic mobility.

The third thing that we'll try and do is understanding the determinants of various types of social capital. And in particular, we'll be focusing on a new measure of social capital we develop in this project we call economic connectiveness. The extent to which high and low-income individuals within a community are connected with each other.

And then lastly, as part of this project, we'll release a publicly available dataset on all of these social capital measures for every zip code, every high school, and every college within the United States to allow all of you on this call, and everyone else in the research and policy community to really,

you know, take what we started, but really take it further and, you know, think about what types of interventions might allow us to increase social capital across our communities.

So, as I mentioned before, one key measure of social capital that we spend a lot of time thinking about across these papers is what we call economic connectedness. Formerly, we defined economic connectedness as twice the share of high-income friends within the social networks of low-income individuals. What you can see here is a map of the United States showing you the geographic distribution of this measure of economic connectedness. Green or blue areas are those with high economic connectedness. Red areas are those with low economic connectedness. And again, the scale is pretty substantially wide.

So, you know, in the top sort of decile of the distribution of economic connectedness, low-income individuals have more than half of their friends be high income. And those would be areas in the rural Midwest that we, for example, see on this map. While in other parts of the country, you know, fewer than 25 percent of low-income individuals have high-SES.

Now, one sort of central thing if you think back to the map that Raj started describing up front, is that there seem to be striking similarities between the types of areas that in the first map had low upward income mobility and the types of areas that you can see in this map having relatively low economic connectedness. And we're going to explore that relationship more formally in just a few minutes.

One of the very nice things of this about the scale of this data is that we can't just explore, you know, variation and economic connectedness across countries, but we can drill into sort of metro areas and look at variation in all of these social capital measures across zip codes within metro areas. So, this is just an example here. I'm looking at the LA metro area on the left panel. You see a map of upward economic mobility defined similarly as Raj showed you earlier on. And on the right map, is a, you know, is the distribution of economic connectedness across zip codes within Los Angeles. And again, you can see that not just across counties, but also within counties across zip code, it seems to be those areas that have high economic connectedness that also seem to have high economic mobility.

We study this a little bit more formally and through a variety of statistical analyses. What I'm showing you here is very simple univariate correlations on the horizontal axis here. I'm plotting the univariate correlation between economic -- between social capital measures in a given county and upward economic mobility in a given county. And different rows here correspond to these different concepts of social capital.

The first row is the concept of economic connectedness. This shows you sort of quantitatively the correlations that you could already in the maps. There's an extremely high correlation of a .65 and above between areas that have high economic connectedness and areas that have high upward income mobility. For the other measures of social capital that we construct in this paper, the correlations with upward income mobility are much, much lower. And so, given the motivation that we had as a research team coming in trying to understand upward income mobility, we spent a lot of time in this paper understanding economic connectedness, and a little less time trying to unpack these other measures.

I think it's just important to point out that we don't think these other measures are any less important or less correct measures of social capital. I really think for us the takeaway is that there's actually all of these distinct measures of social capital around. That some communities are rich in some types of social capital but might be poor in other types of social capital. That it's important to be precise about what measure you have in mind when you talk about it.

But one of the things we already find is that while economic connectedness might be the most predictive measure for things like upward income mobility, some of these other measures like network cohesiveness are actually going to be more predictive for other outcomes such as life expectancy, et cetera. So, just to say we don't think there's a right or a wrong one. I think all of these measures are right. All of these measures have a lot of solid theoretical foundations. The beauty of being able to measure all of them is that we can sort of spend more time exploring which measure matters for what outcomes.

Now, one of the reasons we then, you know, that what we then do next in the paper is

really trying to understand why this correlation between economic connectedness and economic mobility comes about. Because one of the obvious things that you would say is, well, these areas that have high economic connectedness, they might well be different on a lot of other characteristics. They might, for example, be richer areas. And that's likely going to be true, right? Areas where you have more high-income people around are going to be areas with more resources, et cetera, which might be to high output income mobility. But there are also going to be areas where low-income people in those areas almost by the nature of being surrounded by high-income people have the chance to make more high-income friends.

And so, what we will try and do in the paper is to try and use some statistical techniques to understand a little bit about the relative contribution of economic connectedness versus some of these other factors. And I'm going to show you on the next few slides one of them, which is probably the most central one, which is average incomes in those areas.

So, what I'm plotting here is a scatter plot. Each dot here corresponds to a U.S. zip code. On the horizontal axis, we are plotting the median household income in that zip code. And on the vertical axis, we are plotting economic connectedness. Again, the share of high-income friends in the networks of low-income individuals. And unsurprisingly, what you see is that there is a strong upward relationship here. As we said before, in areas where there's more rich people around, it is going to be more like -- more easy for low-income individuals to make rich friends.

But one of the interesting things you see is that holding income fix sort of going up vertical slices of this graph, you still find large differences in economic connectedness. So, two areas with the same income composition might have very different degrees of cross-class interactions. And so, what we can now do is we can try and understand which of these two dimensions is more important in terms of explaining variation in economic mobility.

And in order to do that, the next slide colors the different dots by the degree of upward income mobility in those zip codes. And so, now, we're going to go back to comparing vertical and horizontal slices of this graph. So, if you're going to compare this vertical slice of the graph here, these

are all areas with pretty similar income levels, but different degrees of economic connectedness. And what you see is if you go from the bottom to the top, you know, holding income fix, areas with more economic connectedness are areas with higher upward income mobility.

On the flipside, if you're going to start looking at horizontal slices of this graph, these are areas with widely different average incomes, but similar degrees of, you know, connectedness of low-income people to high-income people. You actually don't see substantial differences in upward income mobility. And, you know, this finding is at least suggestive and I think, you know, we're excited to do a lot more work in that space and hope many of you will join us, is suggestive that one of the reasons why areas with higher incomes on average foster more upward income mobility is because those are the areas where low-income people have more high-income friends within their social networks. But importantly, that just having high-income people around you without making those connections, doesn't seem to be enough at least in this correlational sense.

And again, I think there's a lot more work to be done here to drill into the causal mechanisms between economic connectedness and upward economic mobility. There's obviously lots of theory behind this, but I think that, you know, this seems to suggest that at least high income by itself without not also leading to higher economic connectedness might not be what's really necessary.

So, then in the next bit of the paper what we try and do is we try and explore, well, why are some areas or why do some areas have higher economic connectedness than others? And we conceptually separate this into two possible explanations. The first one is what we're going to call exposure or segregation by income. And I think this is best understood in the concept of a specific social setting where individuals make friends. Here we're going to be focusing on schools.

So, in the left panel what you can see is two schools that are separated by income. So, in the left school you only have high income, high-SES children and in the right schools you only have low-income children. And, you know, this type of separation by income might be one driver of why low and high-SES individuals might not be as connected to each other because they just, you know, move in different social settings. They go to a different school, different colleges, different religious organizations.

But in addition to this exposure, there's the second determinant, which we're going to call friending bias, which is the degree to which two individuals of different incomes or different social class, or different other characteristics interact with each other, conditional on being exposed to each other. So, in the right panel, we have two schools that are actually fairly balanced by socioeconomic composition. So, both of these schools have two high and two low-SES individuals. But what might turn out is that there's a lot of friending bias in these schools. So, the high and low, you know, the high-SES individuals are only friends with other high-SES individuals and vice versa.

And so, what we want to do is we want to try and understand how important are differences in exposure versus friending bias in terms of understanding why low-SES individuals on average have so many fewer high-SES friends than high-SES individuals do? And what we find quantitatively in the data is that both of these measures are approximately equally important. So, about half of the difference in the share of high-SES friends between low and high-SES individuals is driven by differences in exposure, differences in the types of groups and, you know, and the types of high schools, et cetera, that they go to.

But the other half is driven by friending bias. The fact that even if you had high schools and colleges and churches and so on that were very balanced by incomes, the fact that individuals seem to make friends on average more with people that are like them on all these characteristics explains the other half. And this important the friending bias sort of is one that you can see in a lot of ethnographic evidence. Sociologists have documented this, you know, for a long time.

Here's just a quote from Carmelo Anthony's memoirs of growing up in Baltimore. And he describes his growing up in an area that, you know, at least on his description was relatively integrated by income. So, he said, look, millionaires could live on one side of a road and the projects could be on the other, so this wouldn't be a lot of spatial segregation. But those two worlds would never cross, never make friends, never acknowledge each other. So, the idea is exactly that this type of friending bias that even if you're going to occupy similar spaces, that by itself is not going to be enough to create these types of cross-class links that are important.

So, then in the last bit of the paper what we try and do is to better understand what drives differences in friending bias across settings and across institutions. And so, we first focus across settings. And what I'm plotting here is sort of the average degree of friending bias by different types of social settings where individuals make friends. And so, one very important thing you see here is that within neighborhoods, friending bias is extremely staunch. So, this is exactly, you know, the quote we had before. Within neighborhoods, you might get, you know, rich and poor people potentially living in proximity to each other, you know, it's not to say the U.S. is all -- is everyone's living in the same space. But even if they are, within neighborhoods, you're going to get a lot of friending bias and you're going to get exactly, you know, what Carmelo Anthony highlighted, you don't get a lot of friendship formation across these groups.

On the other hand, two other types of social settings that are important in practice, recreational groups, and religious groups, we find almost no friending bias. Which means that as a low-SES, or a low-income person, in a given recreational group, or in a given religious group, you're equally likely to befriend a rich or a poor peer in those groups. So, we find these large differences across settings in the degree of friending bias, which makes us think that it is not purely capturing individuals' preferences. But that really sort of the structure of institutions and the structures of settings has the ability to drive some of these measures.

What we do in the last part of the paper is rather than look across settings, we're going to look at within institutions, across institutions within the same setting. So, particularly what I'm going to show you next is we're going to compare friending bias across different high schools within the United States. And so, that's what you can see on this graph here. So, every dot on this graph is a high school. And what we're plotting on the horizontal axis is the share of, you know, high-income students in those high schools and measure of exposure to high-SES individuals in the high school. And on the vertical access, we're plotting friending bias where, you know, places to the upper part of that graph are schools with lower friending bias.

And what you can see again is that even holding the socioeconomic composition of a

school fix, again, going up vertical slices of this graph, you can get very, very different degrees of friending bias. So, just, you know, one example that we focus on in the paper that I think is very interesting is comparing Walter Payton College Prep versus Evanston Township high schools, two large high schools in the Chicago metro area. Nearly identical socioeconomic composition, but while in Payton, there's almost no friending bias. So, high and low -- low-SES individuals almost equally likely to befriend a high-SES peer versus a low-SES peer in their high schools. Evanston Township High School has a very substantial friending bias. And we spend a lot of time in the paper trying to think about what it is about those institutions, those schools with high friending bias versus low friending bias.

We document a bunch of patterns. I just want to show you one in the interest of time, which is of the size of the schools, right? So, here, we're plotting friending bias on the vertical axis against the number of students per cohort on the horizontal axis. And what you can see is that larger schools seem to lend themselves to substantially more friending bias than smaller schools. Again, this is something that in other settings, people have, you know, documented and thought about in the past that when you have very, very small groups, it's very hard for cliques to form. Because in some sense everybody has to interact with everybody. But the larger the group, the easier it is for these cliques of, you know, people that are similar on some characteristics to form.

There's lots of other things we talk about in the papers, and I'd love to kind of look forward to the discussion later. But other things that could be going on, you know, the extent of academic tracking within schools seems to play an important part. The structural design of schools, the architecture of, you know, of the schools matters. The extent of Greek life seems to be really an important determinant of friending bias within colleges, and so on.

So, we have a range of things that we identify at least in a correlational sense as being related to the amount of friending bias there is, you know, across these institutions. And our hope is that, you know, this work and hopefully many of you joining us in this research effort, really trying to understand why some institutions have more friending bias than others to help us figure out what it is that, you know, one might be able to do to reduce the degree of friending bias here.

And so, in order to facilitate that, what we've done is we have released all of this zip code college, high school level data on economic connectedness, but also all the other social capital measures. The website is socialcapital.org. And I'm going to stop screensharing now and Raj will just, you know, spend a few minutes walking you through that website, showing you what can be done there and hopefully some of you will find that useful in your own work.

MR. CHETTY: Thanks so much, Johannes. So, I'm just going to jump off of where Johannes left off here and show you that website live, socialcapital.org, which you can go to yourself right now if you'd like. And we wanted to demonstrate the site to you here in the last couple of minutes just to underscore a point that I think Johannes made that I feel is very important that we focused on economic connectedness because of the question we set out that I raised initially. You know, what are the drivers of economic mobility?

We looked at a bunch of different social capital measures that we tried to estimate systematically. And the data led us to focus on economic connectedness and its determinants and understanding friending bias and why people are interacting across class lines in different ways and so forth. That being said, as Johannes pointed out, I think there's a lot of value going forward in further exploring both those connectedness measures, as well as various other measures of social capital. And so, our hope is the research and policy community more broadly will be able to use these data and this data visualization tool that we have here to make progress on those issues.

And so, what I'm starting out with here in this initial view is just a zip code level map of the U.S. where you can see zip code by zip code, and you can look up your own neighborhood. You know, what are levels of economic connectedness? How much are low-income and high-income people interacting with each other across the U.S.? What you can do here now is enter any address that you'd like, very much like a Google map and just zoom into any particular place.

I'm just going to type in Boston where I am and zoom in to look at the data in the Boston metro area, where if I just pull back a little bit, I'm right here in Cambridge, next to Harvard, which happens to have very high economic connectedness. So, lower income folks who live in Cambridge are

interacting a fair bit with higher income folks in general. You can see that within Boston, there's a fair bit of variation in levels of economic connectedness. And these patterns, much as we've shown you, you know, more generally line up very closely with levels of economic mobility where exactly the places that look more economically disconnected where low-income folks are not interacting with high-income folks are precisely the places where we see kids who grow up there have lower changes of escaping poverty.

So, that's the economic connectedness measure. What you can do with this tool is you can then if you'd like dig in further into exposure and friending bias and try to understand what's going on in each place. You can also look at these other measures of social capital. And I just want to give you a quick illustration of how those patterns can look extremely different.

So, here we're looking at a measure of cohesiveness, a notion that's called clustering. Which you can basically think of as if you have two friends, what is the chance that they are in turn friends with each other? If clustering is very high, as shown in the green colored places here, those are places where everyone's friends with everyone basically. You can think of it as a very tight knit community.

In the purple-colored places, you might have some friends here and other friends there, but they're not really friends with each other. It's not a tight knit community. So, what is the pattern you see here? I think it's very intuitive. It goes back to the sociologist James Coleman who made this observation with much more limited data, but we see here it really holds true. The more urban parts of the city where you have more transient folks like Cambridge, for instance, where you might have students who are here for some time but then move elsewhere. They have relatively low clustering. They're not tight knit communities.

If you look down here at Marsh Field, this is in one of the largest Irish communities in Boston, or more generally some of the more outlying suburbs, these are some of the most tight knit communities. The simple point I want to make here is the spatial patterns here of clustering are extremely different from what you saw with economic connectedness. So, this notion of social capital looks very different from the cross-class interaction, and it might matter for other things. And you can take these data and explore that yourself.

One final point let's look at this third measure of social capital, volunteering rates, or civil engagement. So, with the Facebook data, you have the ability to construct very precise measures of you might think of pro-social behavior or participation in volunteering groups in this case. And that again, allows you the granularity to see this behavior at a very fine level. So, if we again start from some of the lower income communities in Boston, the red colors are places where people are volunteering less. And you can see that rates of participation in volunteering groups are very low in these lower income communities, which perhaps is intuitive.

Then when you get to some of the areas like Cambridge again or Brookline and urban Boston, some of the more affluent neighborhoods, you start to see much higher rates of volunteering, very high rates of volunteering. But then you see an interesting pattern. If you go further to the outlying suburbs of the city where for whatever reason that, you know, remains to be explored, maybe it has to do with lower density or less exposure to lower income folks, et cetera, you once again see low rates of volunteering.

So, again, these patterns are very different from what we saw with economic connectedness, add another layer of richness that I think remains to be explored that really hasn't been touched upon in these initial studies. And we invite all of you to look at these data and help us all learn about what may make a difference going forward. So, thanks so much and we'll stop there.

MR. REEVES: Thank you, Raj, and thank you, Johannes. I can't emphasize enough that that was a distillation, a pemican of just a huge amount of research. And I really do encourage everybody, not only checkout socialcapital.org, which Raj just talked about. I think I misnamed it earlier, as well as the papers, and all their accompanying document. As usual, the Opportunity Insights team have done a really great job of sharing just everything you could possibly want to see. So, do check that out.

We're now going to move a conversation I'm super excited about. I'll very briefly introduce our panelists and then go to our first speaker you've already heard mentioned a number of times. So, you're first going to hear from Robert Putnam. Bob is the Peter and Isabel Malkin Professor of

Public Policy at the Kennedy School at Harvard. Obviously, known to many of you in this field. His book, 2000 book, *Bowling Alone* is the book that really put this whole issue on the map. And so, I wasn't joking when I said earlier that one response to this is that Robert Putnam was right all along. It just got just 73 million data points to prove it.

Then we're going to hear from Scott Winship. Scott is a scholar at AEI. He's the Director of Poverty Studies there. Also, of interest to this conversation, he spent a few years as head of the Social Capital Project at the Joint Economic Committee under Senator Mike Lee.

And then you're going to hear from my colleague, Camille Busette, a senior fellow at Brookings, who is the Director of our Race, Prosperity and Inclusion Initiative, an author of a number of recent ethic graphic studies on this issue of social capital.

I'm going to invite each of them first of all just to give their initial responses, what they think is important and salient in this work. I'm going to ask Johannes and Raj to stick around. I'm hoping that they will be able to answer questions and interact a little bit.

But with that, Bob, it's a great pleasure that you're able to joins us. I'm really excited to hear what you think of this work. So, over to you. You're muted, Bob. At least you are for me.

MR. PUTNAM: I hardly ever mute myself, Richard, so.

MR. REEVES: Well, like you're the worst person to be muted on this call right now is Robert Putnam. So, please unmute yourself.

MR. PUTNAM: I want to say quickly, thanks to you, Richard, and to Raj, and the rest of the team for including me in this conversation. I'm going to be telegraphic because we are under serious time constraints here. There have been in the last 25 or 30 years, there have been thousands, probably tens of thousands of research papers and books and so on, on the topic of social capital. This pair of papers is by far, so far, the most important of any of those tens of thousands of papers. So, it's a really big deal.

And it shows massive evidence, and this is a matter of personal gratification, massive evidence, way more than we've ever had before that social capital has a broad range of consequences. It

affects lots of things. We've talked here and I will too about economic mobility, social upward mobility. But there are this data shows and then it allows us to test a wide range of other important consequences of social capital. But it's especially important for social mobility and for equality of opportunity.

And that's important because, and both I and Raj have done other work on this, upward mobility, equality of opportunity has been declining or stagnant or declining for at least the last 50 years. It's an important part of our broader national plight now that the American Dream is not -- well, either it's no longer alive or at least it's vanishing in America. That's why this project is so important.

I want to make three quick further points. And, Richard, you just raise your finger when I'm going way over time. First of all, and Johannes made this very clear, this paper for the first time -- these two papers -- I'm going to speak about a single paper. But these pair of papers for the first time show very clearly that different forms of social capital have different consequences. First of all, that there are many different forms of social capital. They're not all collinear. They're not all the same thing. They're related, but they're not the same thing. And they have different kinds of consequences.

Now, we've talked about, people in this field have talked about that for a long time. But this is the first study that actually shows empirically, massively empirically that many forms of -- that, for example, to use the example that Johannes said, if you're concerned about upper mobility as I am, then there's a specific kind of social capital. Namely, what I would call class bridging social capital. What they call economic connectedness meaning exactly the same thing. That's really important for that outcome.

But then if you're interested in other things, you might very well be interested, like life expectancy, it isn't that variable it's some other -- it isn't that dimension of social capital, it's some other dimension. The ability to show that and then to explore those, which is left actually to all researchers of the world, is a crucial -- that's the first really big contribution, I think, of this paper.

Second is, of course, their emphasis on economic connectedness or what I will using my jargon call class bridging social capital. And this part of the paper, this central part of these two papers, is especially important because class connectedness itself has been declining for at least the last 50 years. They don't show this. In future work, I hope they will show it.

But other people, including me, have shown there's been a monotonic decline. That is a straight-line decline in that form of bridging social capital over the last 50 years, which is surely related to the fact that economic mobility has been declining over 50 years. They don't show that link and it may turn out that our understanding of that will -- surely will as all of us we get more data. But that's why this -- that's one of the reasons why this paper is so important.

Now, I need to say, and this is actually the first not criticism, but more nuanced comment I want to make, they ignore race entirely. And that's a serious problem. That is, we have a problem in this country of low class bridging social capital, and they've described that in wonderful detail. And we also have a problem of low and maybe even lower race bridging social capital. That is how many Black friends do I have? Or Latino friends do I have? Or, conversely, how many White friends does, you know, it happens that my grandchildren, so, most of my grandchildren -- many of my grandchildren are Latinos, in fact, and the question is how many White friends do they have? That's what we mean by racially bridging social capital.

I'm not actually quite sure why that isn't discussed here. I imagine it's possible to get indicators of race from these Facebook data, but maybe not. But that is an important problem yet to be solved I would say in this research agenda.

Finally, -- am I okay, Richard? I'm going to make my last --

MR. REEVES: Yeah, you're good.

MR. PUTNAM: -- point right now.

MR. REEVES: No, you're good. You're good, Bob, yeah.

MR. PUTNAM: I'm going to talk -- they talk and I want to talk about it's the last thing basically that Johannes and Raj then talked about, the causes of friending bias that in class-based friending bias. Have I got the right center of that last part?

First a preliminary point, you don't talk at all about the first, the other part, the other half of what determines this, determines bridging, class bridging social capital. You talk about friending bias a lot. You talk much less about I've forgotten what you call the other half, but I would call it segregation.

That is the fact that Americans are living in segregated communities, increasingly so.

And that I'm not saying -- you can't do everything in a single paper. But that is an important omission from this set of papers because we, that is our country, can control that. There are many -- and we know that that is class segregation. Rich folks living on one side of town, poor folks living on the other side of town has tremendously increased in the last 50 years. So, there's a lot of evidence that shows that.

And that means that quite apart from friending bias, the opportunity for rich folks and rich kids and poor kids to know each other has declined not because of changes in friending bias, but because of changes in that -- Johannes, remind me quickly if you can unmute yourself, what is that the label for that other? Not the friending bias, the other half?

MR. STROEBEL: Exposure.

MR. PUTNAM: Exposure, that's right. So, exposure across class lines has been dramatically declining and that itself is part of the problem. But let's focus as they do on the friending bias. And now, I'm just going to summarize super extremely taking what they just said. First of all, it's important to focus on schools. Schools themselves have a lot of friending bias, but recreation is low friending bias. And why is that important? Because I'm going to go quickly now on this. But extracurricular activities are a big deal. I've gotten a lot of teasing because in a book that I published about 10 years ago, I kept talking about the need to have, you know, stop charging for playing football.

And but that it turns out that is important. And it's not just athletics, of course. It's I'm thinking about schools. The more that schools can enhance activities in which their kids are involved in recreational activities, that will almost certainly decrease friending bias and increase class bridging. Whether it's art class or choral singing or whatever it is, extracurriculars are a big deal. I mean, we could actually talk a little bit more about why that is. It's probably because at that moment, people are focused on a shared goal, you know, scoring a touchdown, or a shared goal of having a good concert. But that's the first actionable outcome of this.

Secondly, we shouldn't ignore at all, and liberals like me are inclined to do this, the

important finding about churches. Religion and churches are a highly controversial topic as we know this morning in the aftermath of the Kansas abortion referendum. But liberals should not ignore that churches are way better than any of our secular institutions in bringing people together across class lines. They may not do so well in bringing people across racial lines, together across racial lines, but they do a great job of bringing people together across class lines.

And, you know, a lot of Americans are really still religious. Maybe a few of the people on this call are. But a lot of Americans are. And we ought to be encouraging them to think about ways in which they can use the fact that rich folks and poor folks are sitting together in the pews and going to the same church suppers, and engaging in the same outreach projects, and so on. So, that's religion is a big deal.

And finally, I think, and Johannes made this point, smaller is beautiful. Indeed, the generalization that small -- sorry about that. That small is good, that's a completely universal generalization to appeal to social capital. Smaller schools, smaller classrooms, smaller firms, smaller countries, smaller cities, I could go on forever, but I won't. Small is good. And that in turn, has powerful implications for the decisions that we are making both as private citizens, as private individuals, and as citizens in this country.

Thanks very much. I'm sorry that I went on so long, Richard. But this is a wonderful paper, a really exciting paper. And lays the groundwork for yet more exciting work to come.

MR. REEVES: You didn't go on too long at all, Bob. That was great, exactly structures the conversation the way I had hoped. And I think this issue of the two, like exposure which Johannes just confirmed is the label, versus friending bias, the way I -- I mean, we're in danger with lots of different labels. The way I thought about that was the difference between integration and interaction, right?

MR. PUTNAM: Yeah.

MR. REEVES: Actually, just because people are together in some institutional space, does not mean interacting with each other. And I wonder whether they think that it's easier to tackle friending bias within existing institutions --

MR. PUTNAM: Oh, yeah.

MR. REEVES: -- than it is to tackle the harder structures of instruments. We'll let them come back. Already the questions are flowing to Johannes and Raj. I'm sure we're going to talk more about race. But, Scott, can you give us your initial reactions to this rich body of research?

MR. WINSHIP: Yes, thanks, Richard. So, first I want to start by addressing the elephant in the room, which is the authors' inexplicable, frankly offensive decision to measure a spectral homophily as, get this, the second largest eigenvalue of a degree normalized rose stochasticized adjacency matrix. I mean, I don't know what inspired that decision. But, you know, you lost me right there.

MR. REEVES: Okay. Can someone mute Scott? Can we actually take him off somehow?

MR. WINSHIP: This was a very technical paper. I want to congratulate your team for another excellent research project. And this is just another example of, I think, you know, the incredible contribution and the Opportunity Insights makes with these releases in the form of the data that they create, which is new knowledge, and which they make publicly available. So, kudos and congratulations there.

I could spend some time talking a little bit about some skepticism about sort of the precision of the causal claims in the papers, but I think, you know, I can't imagine that there are many people that generally would say like big picture like you haven't essentially gotten the story right. That social capital does matter. That there are diverse kinds of social capital. I think that's a really important distinction that you make. And that if we care about upward mobility, we ought to care about social capital.

I am more hopeful that the descriptive stuff that you guys do inspires some more research. And I know from the Social Capital Project when I was working on that, it still is ongoing in the Joint Economic Committee. I'm going to share my screen and immediately regret it. Let's see. So, this is just showing, the top is the team's economic connectedness map that you've already seen. The bottom is a map at the county level of the Social Capital Project, social capital index. Those two measures

correlate, by the way, at something like 0.71. And what you see and also, I have to sort of with no offense to the Penn State folks, I think another important finding in this paper is that the Penn State social capital measure just isn't up to snuff.

It turns out that the Social Capital Project measure correlates pretty strongly with economic mobility as strongly as economic connectedness does. But the point I want to make here is just you can see in both maps, you know, the South really stands out for its low social capital. The upper Midwest and Mountain States really show up for their strong social capital. And we spent a little bit of time looking at that when I was at the Social Capital Project.

Interestingly, I think you can sort of divide the South region into kind of three broad areas. There's kind of the Southeast, which is heavily African American. And we actually produced maps that showed, you know, the ridiculously strong correlation between, you know, just the historical fact of slavery in county by county in the South and in social capital levels today. There's another area that you can sort of think of as a disproportionally White Appalachian area that's a little bit to the north of the Southeast part. And a third is sort of a disproportionately Latino and American Indian area in the Southwest.

And so, it's this really interesting swath, you know, that cuts across a lot of big social categories and, therefore, you know, defies sort of an easy explanation. But I hope that this research will inspire a lot more work into the causes of these historical patterns. There is data out there. I'm sort of, kind of this project has inspired me to take a look at it again, looking at religious adherence in different denominations by county, which there are decent measures of. There's some really interesting findings there.

You know, there's migration patterns that very clearly, you know, lead to I think some of these findings, as well. But that should just be a whole giant research agenda, and especially if we care about upward mobility, figuring out what's going on with the South is really important.

I think the only other thing I'll say right now is I'd be remiss to point out, you know, this paper is looking at the relationship between social capital and upward relative mobility. And so, I think it's important to note that Raj and his team have two papers on mobility trends. There's one on absolute

mobility that shows big declines over time in absolute mobility, whether you end up better off than your parents at the same age.

But their paper on relative mobility sort of ratified, you know, kind of what a bunch of other researchers had also found, which was that any changes in relative mobility over time have not been that large. And they actually find no change over time. So, I just say that because I think it's important. Sometimes we feel like we can't care about social problems unless they're getting worse. And I would just say, you know, that's not the right way to think about this. Something cannot be getting worse, but still be a huge problem. And I think our relative mobility levels are. So, I really hope people will dig into this further.

MR. REEVES: Great. Thank you, Scott. So, I'm collecting questions to fly back to Johannes and Raj to treat and obviously the race one. Camille may say more about that too. And I think this question of religion too. And of course, it's a chance to plug another of Bob's books because there's a wonderful book called *American Grace*, if I'm getting the title correctly, Bob. Is that the correct title of your book on religion?

MR. PUTNAM: Yeah.

MR. REEVES: And why liberals should take it seriously. Camille, let's hear from you on your initial response, especially given how it connects to your own work in this space.

MS. BUSETTE: Yeah, absolutely and thanks, Richard, for pulling us together. I just want to welcome everybody who's joining us remotely. This is a really, really interesting study and looking forward to the kind of comments we get as we move along. One of the things that I think is impressive about this work is the definition of economic connectedness and how that really, I think, lends some clarity to this discussion about, you know, what types of social capital are important to economic mobility. So, I agree with Bob on that.

I think just the, you know, the sheer volume of data is also incredibly impressive. And I think in that way, provides really quantitative evidence to a range of other kinds of studies that have been done over the decade. So, when I think about William Julius Wilson's *The Truly Disadvantaged*, there's a

discussion in there about the connectedness between different socioeconomic classes and how that changed with a variety of policy initiatives, et cetera.

So, I think those are very, very impressive elements of the paper. I want to, you know, we don't have a lot of time here, so what I want to do is sort of distill my impressions overall. And one thing I want to say is that I think one of the most important questions that the study raises is why behaviorally there is so much inertia in friending behaviors. So, I think it forces us in a very good way to look at behaviors as an important element of economic mobility.

And so, for people who think that, you know, other sort of institutional reasons, et cetera, we now also have to really treat social connectedness and economic connectedness as an important variable in economic mobility. So, I think it raises the profile of that variable. But I think it also raises this question about friending bias and why there's so much inertia there.

And so, I think that's, to me, that's sort of the frontier of where we need to be headed. And I think about this in a couple of different ways. And I know that we all have worked on social capital, but I wanted to kind of think about the audience that we are addressing here who might be laypeople. So, you know, when you think about who befriends whom, right, and what that happens and the context under which that happens. You guys provided the example of the different kinds of schools sort of and where, you know, you still get a kind of friending bias.

And there, I think, what's operating is a certain amount of the importance of friends as status symbols. And so, I think there's something you need to kind of uncover there, which may not be happening in a kind of religious institution context. Given the nature of religious organizations, that kind of bias isn't looked upon as particularly positive. So, I just think that there is something there that we kind of need to uncover and this paper does raise that question. So, I think that's really important.

The second thing is there is the omission of race, I think, is glaring and really problematic here. And I'm not just saying that because I happen to work on it, but I'm saying it because of the importance of public consumption of this data. So, as we all know, the *New York Times* did a distillation of this work a couple of days ago. And basically, the headline was, you know, it's across SES

connections that really count for economic mobility.

That's what the laypeople and that's what public policy makers are going to take away from this. And the fact that you did some testing on sort of, you know, Blacks in low-income communities connecting with Blacks in higher income communities that sort of -- that kind of connection does not really speak to the problem of race that we have in this country. Which is why we do not get connections even at the same SES level, let alone across SES levels across races. And so, that I think is a huge omission, but it's important because in the public consumption of this data, people are going to say, oh, well, you know, race doesn't really matter. They tested for that anyway. And what really matters is SES connections.

And so, I think we're going to have to think about a way to articulate the importance of this study, which I think is really around how do we shape behaviors and why are behaviors different in like religious associations versus a neighborhood or a school. But we also need to be thinking about how we think about race in the context of economic connectedness. And so, I'm going to just stop there. But I think, you know, overall, great study, raises some really excellent and interesting questions.

MR. REEVES: Thank you, Camille. I'm going to throw this back to Raj and Johannes, you can handle these anyway you want. A couple of things. One is I think this fascinating point about incentives around friending, right? There's friending bias, but there's your point about incentives in different institutions, which way do the incentives run? I was thinking what's the line from scripture, he who does this to the least among us, does it unto me. So, that almost in a religious organization, it's the other way around, right? The status is to go with the people who are least among us and help them.

But this issue of race has obviously come up glaring, problematic, et cetera. So, Raj and Johannes, I'd love you to answer that. I think one of the tensions here, if I can just say this, is that -- and this has been true of your other work too, you're very keen to show that race in and of itself is very often not a causal factor. And so, in your early work on upward mobility you showed that White people in predominantly Black neighborhoods also had low upward mobility.

But I think my criticism about it at the time is similar to what you're hearing now, which is

it is also true that most of the people who live in predominantly Black neighborhoods are Black. And so, it's quite hard even with kind of good sophisticated empirical analysis so you can't really you can't control away some of these structural factors, I guess, is what I'm saying. But you do get into some detail in the paper. So, I'd love your responses on that particular question first on the race issue.

MR. CHETTY: Yeah, absolutely, Richard, so happy to respond to that. Let me just first quickly say thank you to Bob, Camille, and Scott for the terrific comments. Absolutely agree with a number of the points you made, and they enrich our understanding in many ways. So, let me start with the issue of race, which is, of course, elephant in the room, one we thought a lot about and one we'd like to approach more precisely in the data going forward.

So, first let me say what I think we can say from this study and earlier work that we've done, and then say, you know, what I think remains to be understood. So, what we are able to say so far is that if you look at places that are say predominantly White or predominantly Black, economic connectedness still matters. So, in other words, what we're finding on the importance of cross-class interaction is not simply confounded by cross-race interaction. Cross-class interaction does seem to matter, conditional on race.

Second, connected to what Richard was just saying on racial segregation, it's been well documented, actually well before our work by folks like David Cutler and Ed Glaeser, that more racially segregated neighborhoods, neighborhoods which are predominantly Black, for example, tend to have lower rates of upward mobility and lower outcomes on various dimensions. We show in this study that that pattern, like a number of others in the literature, can be explained by this economic connectedness variable in a statistical sense.

That is to say once you account for the fact that those neighborhoods tend to be more economically disconnected, which may itself be a causal effect of race, which I will come back to in a second. But once we account for that we can understand why more racially segregated areas have lower levels of upward mobility. That's very similar to the point that Johannes was making with the poverty rates in that colored dot chart. You see the same kind of pattern with racial segregation.

Now, all of that says that at the neighborhood level, class level interaction seems to matter, but to Camille's point and exactly as Bob said, as well, that absolutely does not mean that race itself doesn't matter. We are not able to look at race directly in the study. Due to data limitations, we were not able to, at present, look at the data by race. We're hoping, especially in light of your comments here, that that will become feasible going forward and people will find ways to measure race and measure interaction across racial lines.

The reason I think that's very important is what you all have said and, Richard, you know, I'd want to clarify one thing in what you said about our earlier research, we have as you know done work looking at differences in economic mobility by race using census data linked to tax data at the individual level. And we find very sharp differences in rates of upward mobility even for Black and White kids living in exactly the same neighborhoods at the same level of income, as Camille pointed out, going to the same schools and so forth.

And what I would love to understand is whether that person-level difference in outcomes between a Black kid and a White kid who are in what appear to be the same environment, can be explained by differences in racial bridging capital, as Bob put it. We are not able to do that in the present study. I see that as a central question going forward and I hope we'll be able to address it. So, that's what I'd have to say on race.

MR. REEVES: Sorry, Raj, to interrupt.

MR. CHETTY: Yeah.

MR. REEVES: Just to be clear, it's because you don't know the race of the people --

MR. CHETTY: We don't know the race --

MR. REEVES: -- just to --

MR. CHETTY: -- in the data that we're working with. That's the limitation. Let me quickly then just make, if it's okay, Richard, two more quick points. I'm sorry, is Bob jumping in here?

MR. REEVES: Yeah, go on.

MR. CHETTY: I think you're muted.

MR. PUTNAM: I'm sorry. I have a lot of sympathy with data limitations. Goodness gracious, my whole life has been constrained by data limitations. But I don't actually quite understand this. You must be in a polite way saying and I'll say it and then you can just nod, that Facebook will not release things to you that would allow you to infer race. And there must be a gazillion things in the real Facebook data that, I mean, Facebook has got to know the race. I just don't believe they don't know. They must know the race of every single person on Facebook and the people that they connect to, they're friends on Facebook.

So, how can we help you beat up on Facebook? By the way, you may not know this, Raj, I personally spoke to the head of research at Facebook about 10 years ago saying release the damn data so that other people can look at it. And that's what they've done to you, which is wonderful. I'm glad they've done it. So, what can we now say that would help you get the real data from Facebook? That's my question.

MR. CHETTY: Well, I mean, I appreciate that, Bob. And, you know, I think you're highlighting an important area for further work, which is going to motivate companies like Facebook and others sharing that sort of data. Which I agree, you know, at a technical level one would think is potentially feasible. So, I think that's an important direction for further work. I think these kinds of conversations spark that sort of interest.

Let me say on the data front and Camille also pointed out, you know, the richness of the data, I do want to thank Meta, the owner of the Facebook platform, for making this data available to researchers and then being able to release the privacy protected public statistics that I think will be very valuable for the field and for policy. And in particular, Mark Zuckerberg, Mike Bailey, a number of others in the company who really invested a great deal to make this possible.

So, more broadly, you know, I think private sector companies in America increasingly hold a tremendous amount of data that can shed light on critical, social, and economic policy questions. And I hope this will be a step in the direction of using the data in the way that you describe going forward.

I want to make one final quick point related to what you all said on policy implications,

which I'm sure we'll get into in more detail as well, Richard. Bob emphasized the importance of exposure and noted that we focus a lot of friending bias. And I want to underscore that's not because we think segregation is not important and it's only about friending bias or friending bias is easier to address or something like that. We made that very deliberate decision because our sense is there's been a tremendous amount of focus on discussing ways to address segregation. They have not necessarily been successful. But people talk about things like changing zoning laws and affordable housing policies and busing programs and so forth and so on. And absolutely we think that needs to be a part of the conversation.

What we're trying to highlight here is even if you solve all of those issues, we need to also think about the types of interaction issues that Camille was highlighting. So, just to clarify on that. So, back to you, Richard, thank you.

MR. REEVES: Thank you, Raj. Johannes, I just want to give you an opportunity for anything you wanted to amplify from what Raj has said before I go back to the panel.

MR. STROEBEL: No, let's go back to the panel.

MR. REEVES: Great, perfect. So, I think you've set that up nicely, Raj. We're getting a lot of questions coming in and I think we can move, given the time, to some of the implications of this research. I think you've just said that very well, which is you show equal weight roughly by exposure, to use your language, in friending bias.

I think it's also worth saying that your data allows people to see in particular places and in particular institutions which is the most important. And so, this is not just a general point you're making. What you're doing is saying if you're interested in economic connectedness, you can go see what seem to be the biggest barriers in your area and help that inform policy. So, I think that's incredibly important. This is not just a theoretical point. It's a practical one.

That said, I do think this kind of focus on exposure, interaction, and so on is important. And I think the questions we're getting are related to that especially around education. And, Bob, you've already mentioned this I think in terms of para educational activities. But I'd love just to get the thoughts

from the panel, generally, on what does this mean for policy. I'd love it if you addressed education specifically.

So, Emily Hunt, for example, from the Education Policy Institute asks, what can education policy or schools themselves do to actively promote connectedness? And what's currently getting in the way? So, that's a good question. Because what are the maybe inadvertent barriers to that too? So, happy to sort of just free flow this a little bit. But anybody that wants to kind of kick-in on that would be great. Maybe Camille, I know you've done work on this. And then we can come back to Scott and Bob.

MS. BUSETTE: Sure, I'm happy to talk about that. So, you know, I think one of the reasons that this study is particularly important is it does help us focus on these elements like friending bias, like segregation, et cetera, some of the nice crisp concepts that have emerged from the research. And so, I do think it's important because we are all trying to figure out how we, you know, incentivize, or motivate economic mobility, and the reason that that's important. It's important, you know, for our GDP. It's important for the quality of life that people live. It's important for the ways in which our community is going to continue -- communities are going to continue to associate, given that we have greater and greater diversity. So, I just think this opens up an area of inquiry, policy inquiry, which I think is very important.

But talking specifically about education, you know, I think one of the interesting elements of the study, the findings of the study is really around not only the exposure, but the friendship bias, and the differences between a couple of the schools that they looked at. And so there, I think, this is really very micro, but micro is important. So, for instance, in the Payton school, what were the things that were happening there that really led to a kind of, you know, greater connectedness across lines, SES lines, than we had seen in the Evanston school, for instance? So, I think that's important in an educational sort of dimension.

And the other thing I'm going to say, because of the work that you and I have done, Richard, is that another way to be thinking about this is what are the things that you do not want to do, right? And so, I think it's really important when you think about school climate, and juvenile detention, et

cetera, you really want to ask yourself whether or not some of these older techniques where people are separated and stigmatized, et cetera, are really necessary, given what we know about brain development. And then are they at all going to be, you know, implicated in the ways in which people move ahead economically given this new study. So, I think that's where I would sort of start this conversation.

MR. REEVES: Yeah, yeah, exclusion is not a good place to start if you want to do this. Bob and then Scott.

MR. PUTNAM: I'll be brief because I just want to give one example and build on what I've already said. Extracurricular activities are a big deal for building bridging -- actually racially bridging. I mean, this study doesn't show it, but for racially bridging social capital as well as for class bridging social capital. Lots of work on that. Extracurriculars are a big deal.

Barriers, well, over the last -- I'm now quoting data from memory so, I may not have the point estimates right, but the basic fact is true -- over the last 50 years, the number of American kids who have to pay, it's called pay to play, have to pay in order to play football, or basketball, or, you know, or whatever, or trombone, has gone from about 5 percent to about 80 percent in schools across America. And that's been happening actually on our watch. And it's been done in the name of, oh, well, we can't fund frills. We've got to stop funding frills and just, you know, fund the basics.

But for this audience, I don't need to say, getting connected with other people in that kind of way is not a frill for the country. It's definitely not a frill for community it's not a frill. And, you know, I mean, I get --

MR. REEVES: Right. Yeah, yeah.

MR. PUTNAM: -- really angry about this pay to play because it's so simple to solve. You just have to reallocate funds a little bit.

MR. REEVES: Yeah. If you just read that chapter of our kids, I think. And actually, the finding here, the economic connectedness is more important than some of this, the math scores and stuff, I think it speaks to that. Scott, I'd love your just responses to some, what do you -- you're a policy maker, what do you think implications here are for policy? It doesn't have to be on education, but just what's the

so what for you? We're coming up against a little of a time pressure here. But I'd love you just to like what do you want people to take away in terms of what should we do about this?

MR. WINSHIP: So, I think really quickly a couple of points. On education, you know, it seems like we ought to be thinking about whether there are kind of clearly better and worse ways to go about increasing economic connectedness. So, you know, I would argue we should promote school choice through policies like open enrollment and vouchers, rather than return to something like bussing, you know, which is hugely unpopular for a lot of White and Black families.

We should invest in early childhood education for poor kids to increase school readiness, rather than abolishing, you know, AP, watering down AP classes, or abolishing gifted and talented programs, for instance. We should improve poor kids' SAT scores, I would argue, rather than abolishing the SAT in order to get more economic connectedness.

So, I think there are broader consequences from some of these policies. There's also a zero-sumness that I think, you know, as sort of the dark side of all of this that actually you can use the data to look at. You know, is it the case that economic connectedness of high-SES kids to low-SES kids affects their economic mobility? And I don't know the answer to that. A lot of parents, I think, think that coefficient is negatively signed. Maybe they're wrong. If they're wrong, great. That's like more evidence that we ought to be going full stop, you know, to achieve more of this integration. If the sign's negative, you know, then we're back to Richard's kind of dream hoarding scenario. You know, the sort of problem oftentimes is us.

And then finally, I'd be remiss also if I didn't bring up, you know, social capital refers to the valuable and productive features of our relationships. And no relationships are so important as our family ties. And so, I do think there was a little bit of a missed opportunity in this paper to highlight the important findings of the current research that you're doing and of the past research that just show over and over again that family structure, you know, has really strong associations that rival social capital, frankly. You know, I think when you control for your economic connectedness measure, the share of households with a single parent remains, you know, almost as important it's the big confidence interval,

it's an imprecise estimate, but still looks incredibly important.

And that ought to really be a focus too as part of talking about social capital, I think there's this weird thing particularly in academia where like, you know, some social scientists study the family and single parenthood and some study social capital and those are just different things. And they're not different things. They're really the same thing. And, you know, how do we go about strengthening up the family? You know, that's probably its own topic for a panel for another day. But I do think that's an important implication in research.

MR. REEVES: Well, it's good debate as to what, you know, where family sits within the social capital definition as you say they do address this somewhat in this paper. But I shouldn't speak for Johannes and Raj. I want them to have the last word in just a moment. But I think again, it's not -- I don't think many people were surprised when you look at the chart showing that there's a relationship between, you know, family stability and outcomes. I think they would be surprised to see that economic connectedness plays at least as big a role.

So, I think again, in the interests of like, well, you know, what's new here, that'd be an emphasis. But I'd love just as we -- I'd like to go back to Raj and Johannes just to give them the closing words. I'll add my own point, but if there's anyone's bursting to say before we go back to them and let me know. I think we haven't mentioned, we haven't talked a bit -- if you mention anything about religion on the way out, that would be interesting given there is a bit of secularization right now and does that matter at all? Is there anything we can do about that?

But I also think this point about institutions, the point about after school activities. They also find, I think you'll correct me if I'm wrong, that select the people who passed a test who get into a school, there's more economic connectedness there. And it looks like that might not be about the fact of having passed a test. It's the fact of having something in common other than just they live in the same neighborhood.

So, at its most provocative, this research might threaten the whole ideal of just the neighborhood public school where you just everyone just goes to the same school. Camille and I have

kids who happen to have gone or will be going to a massive suburban school in a very good school district where there's huge micro segregation. There's 3,000 kids there or whatever and there's massive segregation within the school.

And so, do we go smaller? Do we rethink the whole ethos where you just put kids into the local public school? I don't know if anyone has quick reactions to that from the panel. Otherwise, I'm going to go to Johannes and then give the last word to Raj on any of the above in the last two minutes. And again, I apologize for how quickly we're having to do this but thoughts on some of what you've heard.

MR. STROEBEL: Yes, thank you, Richard. So, I'll start and then Raj finishes out. So, I really loved Camille's comments on sort of these micro interventions at the school level that you would have to think about to avoid the segregation within schools that Richard just highlighted. And, you know, I think, you know, in the paper, you know, Camille asked what do to and what not to do. And at this stage, we largely have correlations. We can find that, you know, characteristics of schools with low friending bias that seem to do well very much what Professor Putnam was saying is really aligned with extracurricular activities.

Schools with pep rallies, which to me as a non-American, was something I'd never heard about before, but seems to be something that seems to be fostering these types of, you know, cross-class links. School uniforms might be playing a role as something that can help with that again to kind of take obvious markers of class off the table.

On the things of what not to do, I mean, one thing that keeps coming up as we look into this is the design of school buildings. You have to be mindful about how you build physical space that people interact with. So, if you're going to have three cafeterias and you only offer free and reduced lunch in one of them, what do you think is going to happen about how kids are going to hang out and where they're not going to hang out? So, being mindful about this is going to be really important.

I think what we really hope will come out of this is that people will use the data that, you know, we're sharing on socialcapital.org, which has information on friending bias for every single high school in the U.S. And start to develop exactly these types of best practices, what to do and what not to

do in Camille's words. To really kind of inform this debate going forward for us to learn more about what's going on.

I just want to, one other thing that Scott mentioned I think is really important. You know, we focus on the effect of these cross-class friendships on the, you know, the adult incomes of low-income kids. And there's this question that you've raised, which I think is an important one is what do more cross-class friendships do to the, you know, the prospect of higher income kids? And what's actually really interesting to us is that we found is that after you control for average neighborhood income composition, which controls for things like the resources available, school quality, et cetera, we find no effect on the incomes of children growing up in high-income families, the adult incomes of children growing in high-income families, and the extent of their cross-class friendships.

So, it really does seem to be that holding the, you know, holding the resources fix, those cross-class friendships can help the lower income kids without necessarily leading to worse outcomes for the higher income kids. So, I think that's something really important in this paper as well. So, I'm going to just do these two. We're already out of time and Raj has probably one or two comments as well. And, you know, I'm already going to say thank you to everybody.

MR. REEVES: Thanks, Johannes. Avoiding zero-sum games is a great approach for public policy. I think Bob's written about that before. Raj, any thoughts before I close this out?

MR. CHETTY: Yeah, I'll just make one final remark. This has been such a rich conversation, so many different dimensions to think about. Thank you all.

I think our conversation here for good reason is focused specifically on how to increase social capital, how might you reduce friending bias, increase integration, and so forth. As I've been thinking about these issues, I think there are some lessons also for other policy domains that don’t necessarily directly relate to social capital itself. So, what I mean by that is in the design of many other policies, we're increasingly finding that, for example, the types of job training programs or the types of affordable housing policies that are most effective as shown by randomized trials, tend to have what I would call kind of a social support or a social capital property to them.

So, as many of you will know, there's been a long history, for example, of job training programs that have been attempted going back to the 1980s, evaluated through randomized trials, have had a very disappointing record of success. You try to give people a set of technical skills, they end up not having dramatically better outcomes in the labor market. Recently, there have been a slew of what people are calling sectoral job training programs, programs like Year Up or First Scholars, which give you requisite technical skills, but also very importantly have a mentoring component, have a networking component where they connect you to folks who can give you a job in a particular company and so forth.

And again, in randomized trials, those types of programs showed dramatic large impacts. We're seeing that sort of theme in many different policy domains. And so, one thing I'd want to leave everyone with is as you think about interventions in a variety of different spaces, from education to job training, to affordable housing, I think it's very important that we think about going beyond pure provision of resources. Here's the money, here's a check, here's a housing voucher. Actually, equipping people with the social capital, they need to make use of those resources and amplify the impacts of the policies we're all implementing to try to increase upward mobility. Thanks.

MR. REEVES: That's fantastic, Raj. I think it echoes the work of everybody that's been on this call that relationships are not separate to resources. In some ways they are the most important resource themselves. We always end these sorts of discussions by saying we've only scratched the surface. On this occasion, we've only scratched the surface of the surface of what's here. So, I strongly encourage you, implore you, I order you to go to socialcapital.org and have a look at your local area, high school, et cetera.

But with that, huge thanks to Camille, my colleague, Camille, Scott Winship from AEI, Robert Putnam in many ways, the father of this whole field, and especially to Johannes and Raj for the extraordinarily interesting work that you've brought before us and giving us plenty to think about. So, and to everybody that's joined us from around the world, thank you so much. Watch this space. There'll be a recording. There's much more to read. And have a great day, and look after yourselves, and, of course, make a new friend.

MS. BUSETTE: Thank you all.

* * * * *

CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Carleton J. Anderson, III

(Signature and Seal on File)

Notary Public in and for the Commonwealth of Virginia

Commission No. 351998

Expires: November 30, 2024