



CONVERSATIONS WITH AN EXPERT



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TEXAS A&M UNIVERSITY

Dr. Nathaniel Hendren was the spring 2019 recipient of the Kirby Distinguished Visiting Professorship. On February 19, he gave a presentation titled, “Improving Economic Opportunity in the United States.” During his visit, Dr. Hendren was interviewed by PERC’s Dr. Andrew J. Rettenmaier.

In your work on economic mobility, you and a team of other researchers have assembled big data sets. First were the projects using Internal Revenue Service (IRS) tax records on upwards of 40 million children and their parents. Now your projects link not only parents’ and children’s tax records, but also link the tax records to census data. How did you and your team work through all the necessary approvals and logistics to make these projects happen?

We’ve been fortunate enough to have a series of wonderful collaborators that have helped us through this process, collaborators at the Census Bureau on the more recent work, and more generally people at the Treasury, and then a range of folks at the IRS that have helped along the way.

The short answer is there is a tremendous amount of work that goes into issues that arise when working with big data and regulatory compliance. It’s understanding and making sure that all the data is being used in ways that are appropriate, that the use is in the spirit of the applicable laws, but also hopefully in the public interest. What’s helped us advance more and more through using these data is to do something with the data that, we hope, provides returns back to the public at large.

Back when I joined Harvard in 2012 - 2013, Raj Chetty and John Friedman had been working with other collaborators merging some of those data together and working with IRS tax records. When I came along, I had a conversation with Raj about using the data to study an old question about social mobility and the extent to which there was social mobility. The question exploits

the idea that we could link parents and kids together. When I came into this, we did exactly as you say and exploited the gift that Reagan gave us as part of the 1986 tax reform bill that required parents to list the social security numbers for children on tax returns.

What this allows us to do is to have a link between parents and children on those data that we didn’t have before and to understand the relationship between parents’ and kids’ outcomes. I came along for the ride starting there and have been fortunate enough to continue collaborations with folks at the Treasury and now, more recently, at the Census Bureau that we’re enormously excited about.

You’ve been involved in the Equality of Opportunity Project and now Opportunity Insights. What is the mission of each group and how are the two groups related?

The Equality of Opportunity Project was a project that Raj and I started to popularize the mobility work. We realized after the launching of that group that there was enormous interest not just in understanding the research, but also in trying to construct policies to improve upward mobility in the U.S.

We wanted to make an organization that would be able to translate research into policy and to form an organization that was going to really motivate itself around the single goal of improving upward mobility. That’s what we orient ourselves around. We use big data tools to do that and use whatever method we think is the most effective but focus on that goal.



In your paper “Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States” you find that upward mobility for children who grow up in households in the lower part of the parents’ income distribution varies by commuting zone. What are some of the factors related to the area in which a child grows up that are correlated with higher mobility?

We find that across the U.S., places that have more two-parent families tend to have higher rates of upward mobility; places that score higher on measures of social capital and civic engagement; places that have higher quality schools and basically higher test scores; places that have less residential segregation; and lastly, places that tend to have less economic inequality within the commuting zones tend to have higher rates of upward mobility. We’ve done some decompositions to try to understand local inequality and the evidence does seem to suggest that at a cross-sectional level, it’s really about middle-class inequality and not as much about the top 1% inequalities in driving the broader correlation.

You find a different result at the top of the income distribution. Regression to the mean from the top of the distribution does not vary as much by commuting zone. That is, children who grow up in households at the 90th percentile migrate down to about the 60th

to 65th percentile. What are some of the reasons you find for this consistent result?

It’s the ‘why’ that’s the hard piece of that question. You are absolutely right in thinking that there is generally less variation at the top of the income distribution, which is consistent with a lot of the stories we’ve heard. The one I personally like, but don’t have any evidence for is that there are some areas of the country where children who grow up in disadvantaged households and received disproportionately low investments, these then produce the lower outcomes we see when they are adults.

For more affluent families, if you took a standard Becker model off the shelf, you would expect that those families could, in a sense, buy those investments for their children. That is a very stylized view of the world, but one that I think could fit that pattern, where once you have resources in the household, you are able to buy yourself out of those problems. You see less variation in outcomes for children from more affluent households.

There is enormous regression to the mean in general, and that is true in the U.S., it is true in every country where it has been measured that if your parents are at the very bottom of the poverty condition, the odds are that you will not earn less than your parents; you will rise up in the income distribution. Conversely, if your parents are millionaires, the odds are that you will earn

less than your parents. The basic idea in our work is that the extent to which you are reverting back to the mean varies dramatically based on where you grow up, your race or ethnicity, or on your gender. These differences emerge and have implications on the long-run path of inequality and opportunity.

In your paper “Race and Economic Opportunity in the United States: An Intergenerational Perspective,” you and your coauthors again link parents and children and track economic mobility, but with the added demographic information from the 2000 and 2010 Census. You identify differential economic mobility by race and sex at the national level. What are some of the key findings at the national level?

The starkest things we find are the differences in upward mobility across races. Black and Native American children have both lower rates of upward mobility and higher rates of downward mobility, followed by Hispanic, white and Asian children. You can quantify this to suggest that over generations, it doesn't look like the race gap is declining. The degree of intergenerational persistence that we see and the difference in generational mobility across races suggests they are actually in a stasis where the black-white income gap does not look like it will decline in the next generation.

By zooming in on the black-white earnings gap, we document that from a statistical standpoint, the majority of this can be explained by differences in white versus black male children's outcomes in adulthood. In contrast, black and white females, on average, have similar earnings, conditional on growing up in the same parental income households. In fact, the traditional gap is actually slightly reversed for a given level of parental earnings - black females tend to earn slightly more than white females in terms of their individual income in adulthood on average.

What is driving the gap for black versus white men? We don't have a precise answer to this, but what we have looked at are patterns like incarceration rates. You can use Census data to ask what fraction of the adult children were incarcerated on the day of the census and how does that vary by the parental income of the household in which they grew up. These differences become sadly stark. 22% of black males who grew up in the lowest income families in the U.S. were incarcerated on a single day, in contrast to about 6% for white males who grew up in the poorest households in the United States. That rate declines for both white males and black males as you go to more affluent families, but for white males who grew up in the top 1% of the highest income

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Received his PhD in Economics from MIT & B.S. from University of Chicago in Mathematics and Economics

In 2018, co-founded Opportunity Insights, a not-for-profit based at Harvard dedicated to developing scalable policy solutions that empower families to rise out of poverty and achieve better life outcomes

Co-Editor of *Journal of Public Economics*

Associate Editor of *Review of Economics and Statistics*

Awarded the Excellence in Refereeing Award from the *American Economic Review* in 2017

Received the Sloan Research Fellowship in 2016

Named *Furer Fellow*, Harvard University in 2015

Received *Heinz Dissertation Award*, National Academy of Social Insurance in 2013

Received the *Ernst Meyer Prize*, The Geneva Association, 2012

Recipient of multiple previous and current National Science Foundation Grants

Selected as one of *The Economist's* Eight Best Young Economists in 2018

families, virtually none of were in prison on the day of the census, in contrast about two and half percent of black males who were imprisoned. If you put that all together, it suggests that the black son of a millionaire has an equal chance of being imprisoned as the white son of a family that earned \$38,000 a year.

These disparities at the national level really start to play out in a stark way when we look at patterns of incarceration. Past incarceration has bearing on future earnings and future employment. Although we don't know the causal mechanisms, there's a large literature to suggest that past incarceration is a pretty good signal of having low lifetime earnings.

The remainder of the paper explores the potential conditions that are favorable for upward mobility. Can you visit with us about what affects upward mobility?

There are things we looked at that can apply across races and things that are also associated with smaller race gaps. In general, the kinds of things that are correlated with outcomes of child mobility across all races are similar to the five factors that we discussed the beginning, but when you zoom down to the local neighborhood, you can start to tease out some of these patterns a little bit more precisely. One factor is the strength of the local economy, where growing up in a neighborhood with more jobs in the local area doesn't seem to be associated with higher rates of upward mobility but growing up in an area where people around you are employed does seem to be correlated with having higher rates of upward mobility.

We also see the more traditional measures of the local neighborhood "quality" like K-12 education scores and poverty rates – those are correlated in ways that you would expect. You also see patterns like the strength of the of the fraction of two-parent households in the neighborhood and measures of civic engagement, like the fraction of people who return their census forms, are all highly correlated with upward mobility.

Across the U.S., the pattern of upward mobility is more correlated with the fraction of people that return their census forms than it is with mean household income. It tells you something different is going on in those areas. When you get down to the micro level, there's a lot of variation at the local level that's not easily explained with covariates. One natural example of this is whether a city's population density has higher rates of upward mobility. The answer is sometimes yes, sometimes no. In Iowa, cities have lower rates of upward mobility, but in areas of the South the cities tend to have higher rates of upward mobility. Also, the places that tend to have

both smaller race gaps and higher rates of upward mobility can be places that have a higher fraction of fathers present.

Is there any other research topic you want to touch on?

More broadly, I'm motivated by the question, "What are the policies that can help us improve the outcomes for the next generation?" The research that we have not talked about looks at people who move across areas in childhood. This research suggests that upward mobility is improved by reducing the barriers families face in attempting to move to better neighborhoods. This is some of our ongoing the work as well in which we are working with housing authorities to reduce barriers for families.

The other piece I would suggest is that if neighborhoods matter, we need to invest in under-resourced neighborhoods that are not providing rates of upward mobility that you would want to have. That's what our results suggest: when kids move across areas, every year of childhood exposure to a place that causes different outcomes affects their outcomes in adulthood. It's never too late to change the trajectory all the way up until age 23, these changes have been shown to have long-running returns.

I'd like to shift gears a bit and ask you about your advice to undergraduate and graduate students in economics. What kind of advice would you give an undergraduate student who is thinking about going to graduate school?

First of all, I think you want to be sure you're interested in going to grad school. How do you know you want to go to grad school? Grad school is the most fun if you enjoy thinking about things in an obsessive way. If you find yourself randomly reading economics articles on the bus, you are a good candidate for grad school.

I was a consultant for a couple years in management consulting. It is a great life and I thoroughly enjoyed it. I went back to school because every day to and from work I would read economics books on the subway in Chicago and I think having a bit of a passion for what you do is important. You should go to graduate school, not because you want to make a lot of money, but because economics is something you just really enjoy thinking about - how people behave and modeling it using the tools and the empirical frameworks that we have. If you are passionate about that, then you should really think seriously about economics and start talking to your professors about it. For particular advice about

how to prep for grad school, I was quite fortunate, that as an undergrad, I took a ton of math classes and I loved math in addition to loving economics. In fact, as an undergrad, I think I liked math more. That's not to say that all good economics uses math, it does not, but I think there's a certain formality to that kind of way of thinking that has helped our field clarify our ideas using formal logic.

What is your advice for graduate students who are choosing a dissertation topic?

Hopefully, if you were interested in reading things on the subway, you were interested in something that brought you to grad school and now you have some tools to address those original questions that motivated you to go to grad school the first place. I think the most valuable things as a graduate is to get obsessed with an idea and let that follow you - go through all the literature that has been written on that idea and then try to figure out: How do I think it's actually different than how people have thought about it? Then, walk yourself through the depths of the 50th paper written on that topic and see what is and isn't there and how your ideas differ. That requires a little bit of a tenacity that is hopefully motivated by your own interests. Always pick the topics that you care about, don't pick a topic because somebody else says "Hey, there's not enough research on this." You should care about the topic and convince others that the topic is important and interesting. Don't let others push you around about doing something because there's some strategy about how it's a good topic. That's not going to really lead to a very fruitful path in my opinion.

What is your advice for students who are embarking on a project that involves data that has restricted access, a data use agreement, or potentially a long research window?

There are many sources of big data out there. There are firms, political campaigns, and government data housed at the state level and federal level and at a wide range of different organizations. But I would also say that if you have friends who work at different firms and they are interested in similar questions to what you're interested in, that can often lead to a natural synergy for getting access to big data in a fairly easy way. I have a few students who have gotten access to big data through those routes and it is often easier than applying for Research Data Center (RDC) access for a project because of restricted slots.

When I was in grad school, a fellow graduate student and I basically cold-called a non-profit organization that was providing loans to people who were marginalized from formal credit bureaus and I was trying to understand to what extent it was providing pathways to the credit market. We worked with the firm and with their administrative data. Back then, I thought big data was anything more than 6,000 records. We were excited about that work and then ended up linking it up to data from credit reports. It all goes back to starting with something you're interested in and developing a connection, sometimes one that you already have. You probably know people who are doing interesting things that you are also interested in studying. That is, I think, one of the easiest sources for big data.

Now, the flip side of that is sometimes what you want to do does require the "big data" and getting access to things like tax records or census data. My advice in this case is to work with people who have hopefully submitted those kinds of applications in the past - people who have submitted a Census or an RDC proposal, people who have submitted proposal the IRS's Statistics of Income group, or co-authors from these organizations to work with on these projects. It is an involved process because the resources are fixed. There's a finite number of slots. As a grad student, I can see how that is a big hurdle. I actually wrote my dissertation with survey data. It is a big impediment to doing research - getting access to a good data set. But, I do think that the most understudied channel is to work with firms.

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