## **Probable Causation, Episode 74: Bryan Stuart**

**Jennifer** [00:00:08] Hello and welcome to Probable Causation, a show about law, economics and crime. I'm your host, Jennifer Doleac of Texas A&M University, where I'm an economics professor and director of the Justice Tech Lab. My guest this week is Bryan Stuart. Bryan is an economist at the Federal Reserve Bank of Philadelphia. Bryan, welcome to the show.

**Bryan** [00:00:26] Thanks so much. Really happy to be here.

**Jennifer** [00:00:28] Today, we're going to talk about your research on social connectedness and crime. But before we get into that, could you tell us about your research expertize more broadly and how you became interested in this topic?

Bryan [00:00:38] Yeah, of course. Happy to. So, you know, my research falls into kind of labor and urban economics, and often it draws on economic history, like the paper that we'll talk about today. One of the things that I've been really interested in is how migration affects people's opportunities for economic mobility and also how migration affects places. And so kind of the precursor into the paper that we're going to talk about today is work with a grad school friend and coauthor, Evan Taylor. And in a paper, we basically looked at how social networks affected where people moved during episodes of mass migration in the United States. And in particular, we were looking at the Great Migration, which we'll have a chance to talk about today. And, you know, the upshot of that paper is that basically for African-American migrants during this period, social networks were really important for where they moved. And that got us to thinking about how these social networks might play a role or not. After the migration was over. In other words, did these social networks affect cities and kind of the urban outcomes that we're interested in there?

**Jennifer** [00:01:45] Yeah.

**Jennifer** [00:01:45] So your paper is titled "The Effect of Social Connectedness on Crime Evidence from the Great Migration." As you said, it's coauthored with Evan Taylor and it's also published in the review of Economics and Statistics. Congrats on finding a great home.

Bryan [00:01:58] Yeah.

Jennifer [00:01:59] So let's start with something basic. So what is social connectedness?

**Bryan** [00:02:04] Yeah. So the way we're going to think about social connectedness in this paper is basically the degree to which individuals have some kind of meaningful social tie. That's a pretty vague definition, like most definitions of social connectedness or social capital. But to be really precise, what we're interested in is the degree to which people have a shared social tie because they came from the same location. So you can imagine if two people were born in the same small town, they might have similar friends, they might be family members. They have shared social connections. And that's the specific nature of social connectedness that we're interested in for this paper.

**Jennifer** [00:02:44] So why might social connectedness affect something like criminal behavior? What are the mechanisms we should have in mind?

**Bryan** [00:02:50] Yeah, absolutely. So let's roll through a few. I think one and maybe the most basic is that social connectedness could affect whether or not a criminal offender is identified and is subsequently punished. You know, if somebody is stealing a wallet on the street, if you know that person, it's going to be a lot easier to find that person and for them to be punished. And so, in turn, that can affect, you know, whether or not people are committing crime or what happens to them after they do commit crime. So that's kind of one thing you could think about, just identification essentially of offenders. The other thing that we can think of and here we're really drawing on some very interesting ethnographic work by Carol Stack is thinking about how social connectedness could affect child development.

**Bryan** [00:03:35] And so you can imagine a variety of cognitive or non cognitive skills that are influenced by the environment in which kids grow up. And so in her ethnography, Carol Stack talks about basically having, you know, three generations of people in a household that are contributing to children's development and helping teach them what is right, what is wrong, establishing norms and so forth. It also could be that, you know, those extra social connections make students study more and it keeps them from kind of loitering instead of doing their homework as well. So that's kind of a broad bucket of child development.

**Bryan** [00:04:15] Also could think about social connectedness as affecting more contemporaneous outcomes for adults. So there's a very large literature, for example, on the role of social networks in helping people find a job. And that if there's somebody that you know who's working at a company, they might tell you about a job and that can help you find better jobs. That also could extend to the housing market as well. And I think in particular, when we're thinking about black individuals in the U.S. who face discrimination in the housing market, it could be that having stronger social connectedness could help people avoid the more discriminatory landlords, for example. And yeah, so those are the kinds of mechanisms that you could imagine arising here.

**Jennifer** [00:04:59] Okay, great. And so before this paper, what did we know about the effects of social connectedness?

**Bryan** [00:05:05] Yeah, so. A way to think about this is through the lens of social capital, which has just been a enormously influential idea across a variety of different social sciences. Social capital is closely related to social connectedness, but oftentimes when people are thinking about social capital, they're thinking about things like trust or reciprocity that can emerge from kind of strong social relationships with each other.

**Bryan** [00:05:30] So they're closely related. But some work by, like sociologists, for example, has shown some very interesting correlations between measures of social capital and outcomes like crime. But I think to understand that, we have to kind of dig in a little bit to how social capital is oftentimes measured in some of the ways that that's measured as just through, say, surveys, where you would ask people questions like, you know, how much do you trust your neighbors or if there was a fight in your neighborhood would you be willing to intervene into that fight and kind of break things up? So people have thought about that as kind of a notion of social capital. There's a really nice paper by Robert Sampson and coauthors that thinks about collective efficacy, where it's really this combination of social cohesion that combined with people's willingness to intervene in those difficult situations.

**Bryan** [00:06:25] And I'm stressing that measurement of social capital, because I think it underscores one of the challenges here, which is, you know, when you think about social capital, requiring that people intervene in difficult situations. Well, that could be you know, economists tend to think of that as an endogenous outcome, which just means that people are investing in their social relationships or intervening in difficult situations in response to the incentives they face. And so if I live in a high crime neighborhood, I might not trust my neighbors, for example. And that, I think, brings up some of the issues. Well, there are a lot of documented correlations between social capital or measures of social connectedness and crime rates. I think the causal evidence on that is quite limited, which is what ultimately motivated us to write this paper.

**Jennifer** [00:07:11] Yeah. You also talk a little bit in the paper about the peer effects literature, which is sort of related here. There's this social capital idea, which I agree is why we, as all of this, is tough to nail down. You know, empirically a causal framework. But there's been more work on peer effects. You might say a little bit about that and how it relates to the concepts you're studying.

**Bryan** [00:07:31] Happy to yeah, I think that's a really important distinction. So when we're thinking about peer effects, both in this paper and I think in most of the literature, we're thinking about two individuals who are either committing crime or not committing crime. So, you know, I think the simplest example, if you think about two friends and one person decides to commit a crime, that person might influence their friend to also commit crime or vice versa if they're desisting from crime. So that's really about, you know, two individuals who are in the position where they may be committing crime and they can influence each other. That's, I think, one way to think about peer effects. We can also think more broadly about spillovers across maybe young adults. So when you think about gang activity, for example, it's not necessarily direct peer effects and that people are friends, but you can have spillovers across rival gangs, for example.

**Bryan** [00:08:25] Now that's different from the notion of the idea of social connectedness that we want to think about here as I'm sure we'll talk it out more. We're thinking about social connectedness among, you know, the parents or the grandparents in a community. So it's among an older generation in that community and how connected those adults are. And that's a relevant distinction because those older folks just aren't committing crime. So it's not about them committing crime or not, but it's more about the influences that they can have on younger individuals in the community.

**Jennifer** [00:08:57] Yeah, and I guess you're thinking of this social connectedness is more of like a community wide measure rather than thinking of the individual. Is that right?

**Bryan** [00:09:05] Yeah, that's absolutely right. So, you know, we're going to have a measure of social connectedness that helps us think about two different cities. And those cities are going to differ in the extent of social connectedness among African-American residents, and that's going to be the main thing we're interested in.

**Jennifer** [00:09:21] Okay. Interesting. So you've already alluded to how difficult a question this is to answer. So say a little bit more about why we don't know more than we do. So we've got this correlational evidence, ethnographic evidence. But what are the the primary hurdles that researchers need to overcome to figure out whether and how much social connectedness, you know, causes different outcomes?

**Bryan** [00:09:43] Yeah, I think in my mind, this is a kind of a combination. You have to have very specific types of data that will allow you to measure social connections. Now, some people have gotten around that by collecting survey evidence, but sometimes that survey evidence forces you to focus on a single city at a single period of time, for example. And I think in general, if you want to try to capture measures of social connections, that's been quite hard. Although there is some interesting work using, you know, Facebook or other kind of online social network data to kind of think about some of those ideas. But in my mind, the even more difficult challenge here is getting exogenous variation in social connectedness. And by that I just mean variation in social connectedness that we think is not going to either be formed in response to existing crime rates in a community or correlated with a whole bunch of unobserved characteristics in a community such as the level of affluence or poverty rates or things like that.

**Bryan** [00:10:44] You know, you can imagine government institutions affecting social connectedness as well. It's kind of a complicated, messy topic. And so feeling confident that you've isolated the underlying source of social connections is a real challenge for empirical research.

**Jennifer** [00:11:00] Yes, you need something like a shock that's as good as random. Right. So sort of the the ideal lab experiment was way you randomize social connectedness across cities. And of course, we don't have quite that. So people like us go hunting for natural experiments. And in this paper you use the Great Migration as a natural experiment that affected social connectedness in various northern cities. So let's talk more about the Great Migration for those who are not familiar with this period in U.S. history. What was it?

**Bryan** [00:11:31] Yeah. So the Great Migration was the movement of millions of African-Americans out of the South, primarily into cities in the Northeast and the Midwest and the western parts of the U.S.. And so this is generally timed to have started around 1915, just kind of at the early onset of World War One. And it's generally thought to have continued through 1970 with some ebbs and flows. But the way I think about this, this is just one of the largest migration episodes in U.S. history and also had dramatic consequences for U.S. cities as we think about them, for economic opportunity for African-Americans as well. So it was a huge migration episode and also one that had really important lasting consequences on people in places.

**Jennifer** [00:12:22] I should flag Ellora Derenoncourt on the show a little while ago and we talked about her paper on the Great Migration. So also I'll throw a link to that in the show notes. People who want to know more. So how did the Great Migration affect social connectedness in the destination cities? You have some great anecdotes in the paper that illustrate how people decided where to move, which I think really helped understand the story.

**Bryan** [00:12:45] Absolutely. Yes. The key here is thinking about these migration networks that I mentioned early on. And so in a kind of the predecessor paper evidence, Evan and I show that these social networks really influenced where people moved. And now just to give you like a simple data point that we see there, if you focus on Pontotoc, Mississippi, which is a small town, something like 15% of the migrants from Pontotoc moved to the same destination, which was Beloit, Wisconsin. And so that's a really big number, 15%. That's something like 70 times larger than the share of Mississippi migrants that moved to Beloit, Wisconsin. So, you know, at that point, you to is there something that there was something special about the movement from Pontotoc, Mississippi, to Beloit, Wisconsin.

And the answer that we propose in that other paper and really do a lot of work to verify that this was about social networks that were formed in the origin communities.

Bryan [00:13:46] So if we take that as kind of the starting point that these social networks mattered for where people moved, we can then think about a consequence of those migration networks. And in particular, we end up with situations where there are some destination cities in which a lot of the migrants came from the same origin town. So in this case, if you think about Beloit, Wisconsin, a large share of their migrants came from a single sending town. Whereas if you look at other destination cities, other migrants came from all over. And so that's the kind of how these migration networks translate into differences across destinations in the concentration of migrants from the same origin community. We have some really striking examples, I think, about how people made these location decisions as well. And one of them actually that we have is about Pontotoc, Mississippi, to Beloit, Wisconsin, in that we know from qualitative research that's been done that basically that migration can be attributed to the actions of a single person.

**Bryan** [00:14:54] That person was John McCord. So he had a job in Beloit, Wisconsin. He'd been working as a janitor at a manufacturing company for about two years. He went home to Mississippi for vacation, and his boss asked him to recruit some workers. And so John McCord brought back 18 unmarried men from Pontotoc to Beloit and that was kind of the starting point that led hundreds of people to ultimately move from Pontotoc to Beloit. And so we think that's an interesting story, in part because it really highlights the things that mattered in that instance, which was that, you know, John McCord was able to convince people from his town to follow him. So he clearly had to have some level of trust and respect in his community.

**Bryan** [00:15:44] And it also was the case that his employer was looking for additional workers at the right time. You know, the time when John was going to go back home for vacation. And so kind of the I think our our read of the historical literature here is that a lot of these episodes stem from the right migrant being in the right place at the right time. Although, of course, as economists, you know, we're duly skeptical of that and so we'll kick the tires on that story a lot as well.

**Jennifer** [00:16:13] Yeah, but just that basic story can kind of help see how this could be luck of the draw. Right. So it's just a matter of luck that you happen to have this one person who happened to be going back for vacation at a time when, you know, he could tell his friends, I've got a job for you if you move north for me. And it happened to be Beloit, Wisconsin, and not some other city that he had moved to initially.

**Jennifer** [00:16:37] And so because what we might be worried about generally is that like the type of person, the type of community that is wants to move together is the they're seeking a low crime rate destinations or something and that is not the story that you just told. But as you say, we will kick the tires on of everything else that might be going on here. But yeah, it's really neat to think about the randomness in all of this and how it produces communities on the other end. So how does this context allow you then to measure the causal effects of social connectedness on crime? What do you actually do with the situation?

**Bryan** [00:17:12] Yeah, I think it's easiest to kind of walk through a really simple example where you just compare two cities. And so for this case, let's continue the example of Beloit, Wisconsin, and let's think about comparing that to another place, which is Middletown, Ohio. So if you look at those two cities, they both got a similar number of total

migrants. So in terms of African-American migrants from the South, the pretty comparable number moved to both those places. And those places were also similar on a lot of other characteristics that you look at in terms of their total population or their manufacturing employment. They're pretty comparable places, but they differ in this notion of social connectedness in that in Beloit, Wisconsin, something like 20% of their migrants came from a single sending town. That's Pontotoc that we've already talked about. Whereas if you look at Middletown, there's no huge concentration of migrants from the same origin community. And so that basic comparison is going to generate variation in social connectedness across these two places. And then we're simply going to ask whether or not crime rates are different in Beloit compared to Middletown.

**Bryan** [00:18:24] Now, in practice, we generalized that example by adjusting for observed differences between places. But at the heart of this is a comparison of saying conditional on the total number of migrants that move to a place which we think is important, I should say, too, because that is you can think about that as a revealed preference measure for how attractive a place was to black migrants. You know, you could imagine if a destination city was just really discriminatory and treated migrants terribly. Migrants probably wouldn't have gone there or stayed there. And so conditioning on the total number of migrants that moved to a place we think of as a really powerful way to assess the overall attractiveness of a location. And then we're just isolating differences in the concentration of migrants from the same origin community.

Jennifer [00:19:14] Yeah. So how exactly do you measure social connectedness?

**Bryan** [00:19:19] Yes. So here we're using. An old index in economics, which is a Herfindahl-Hirschman index. And so the way that we're going to do this is we're going to construct the share of migrants in a destination that came from each origin community. And we're going to square that and add it up. And that gives you the Herfindahl-Hirschman index or the HHI. The way to think about that is that it measures the degree to which migrants tended to come from the same origin community. And so that's the notion of concentration here. It's about concentration from the same origin community.

**Jennifer** [00:20:00] Got it. So if all the migrants in a particular community came from the same place, that would be one. Right?

Bryan [00:20:06] Right, exactly.

**Jennifer** [00:20:07] And then so so closer to one, you've got more social connectedness and closer to zero, you have less.

**Bryan** [00:20:13] Exactly.

Jennifer [00:20:13] As you think about it.

**Jennifer** [00:20:14] Okay, exactly. Right, great. Okay. And then what data are you using for all of this?

**Bryan** [00:20:20] Yeah. So we have access to some pretty unique data which is necessary for constructing that measure of social connectedness. And in particular the data that we have comes from merging of Social Security Administration records. So when folks apply for Social Security numbers and you do this today, you tell the Social Security Administration basically where you were born. And so those administrative data tell us

where people were born. And those data were linked to Medicare records, which provide us with individual's location of residence in old age. And so we have these data for over a million African Americans from the South, which is a pretty large sample size. And that allows us to basically have high quality measures of origin to destination population flows, which is really what we need to measure this notion of social connectedness,.

**Bryan** [00:21:19] I should say, too, that these really capture long run migration choices. So, you know, we know where people were born and where they were living towards the end of their life. And so the flows that we're picking up, these migration flows are really about long run migration flows, but we report some evidence using Census data that there really wasn't a ton of migration after African-Americans moved to the north. So we're not so concerned about that. But that, I think, is the most unique data that we have, this Medicare, Social Security Administration administration at the data linkage. Then we need to measure crime rates. But for that, we're going to turn to pretty standard sources in the FBI has uniform crime reports which will allow us to see the number of crimes reported to police in categories like murder or motor vehicle theft, for example.

**Bryan** [00:22:10] And we'll also turn to some of the FBI's supplementary homicide reports, which provide us with some really interesting information on the circumstances that surround homicides, like what was the relationship between the victim and the offender and what was their race and what were the circumstances of the actual homicide itself?

Jennifer [00:22:29] Okay. And so what outcome measures I'm most interested in here?

Bryan [00:22:33] Yeah. So we are primarily interested in crime rates at the city level. The way that we think about this, you know, there are relying on crimes that are reported to police comes with complicated issues in terms of worrying about measurement error. Those are not measured perfectly, and we spend a lot of time as graduate students trying to kind of dig into those data. So the way we think about this, though, is that homicides are the best measured crime that we have, and there are others that are measured pretty well. So, you know, we think that motor vehicle theft and robbery also seem to be pretty well measured as well. We're going to look at the other crimes as well, but ultimately at city level crime rates that we're interested in. I should stress, too, that that is you know, those are city level crime rates, even though the measure of social connectedness that we're really interested in is about social connectedness among African-Americans from the South. And so that'll bring us to, you know, thinking about direct and indirect effects of this social connectedness on the city level equilibrium.

**Jennifer** [00:23:36] Yes. Great point. Great flag. Yes. And we're thinking about the crime rates you're interested in here. These are index crimes. So more serious, mainly because of those measurement issues here. You were you were talking about I think trying to nail down effects on trespassing would be really difficult here for worried about reporting differences.

**Bryan** [00:23:54] Yes.

**Jennifer** [00:23:55] Okay. So what do you find is the effect of social connectedness on crime rates?

**Bryan** [00:24:01] Yeah. So we find that social connectedness reduces crime. I think one thing to stress why that's not obvious is that some interesting counterexamples where social connectedness could increase crime come from things like the Mafia or the Ku Klux

Klan. So, you know, there are settings where you might think that stronger social ties lead to higher crime rates, but that's not what we find. So we find that stronger social connectedness leads to lower crime rates. That's a pretty robust finding in that we see that negative impact across basically all of the seven index crimes that we look at. And the effects are pretty sizable as well. So to think through that, if we just return to the example we were talking about before, where we have Beloit, Wisconsin and Middletown, Ohio, which are comparable on a lot of dimensions, the difference is that our measure of social connectedness is about four times larger in Beloit than it is in Middletown. So we have a lot more social connectedness there you know, with thanks to John McCord.

**Bryan** [00:25:04] And what we find is that if you were to think about replacing middle towns, the less connected cities, social connectedness with that of Beloit, that you would see something like a 30% decrease in the number of murders or robberies or motor vehicle thefts. So that 30% decrease in crime is pretty big. And I think a way to understand that is to ask, well, how many police officers would we have to add to Middletown in order to reduce the crime rate by a comparable amount? And using estimates from a paper by Aaron Charleson and Justin McCreery suggests that you'd have to increase the size of the police force by something like 44% to achieve a comparable decrease in crime.

**Bryan** [00:25:50] So, you know, in some I would say social connectedness reduces crime. The effects are pretty robust and they're pretty sizable, too.

**Jennifer** [00:25:58] Yeah, very big effects. So as you said earlier, you then kick the tires on these estimates so you can even run a bunch of additional checks to convince yourselves that this relationship represents the causal effect of social connectedness. So what are some of the alternative stories you had in mind that you that readers or listeners might be worried about? And how were you able to rule them out?

**Bryan** [00:26:20] Yeah. So we'll start with maybe the easiest to the more difficult stories. So, you know, the easiest things that we can worry about are just observable characteristics of cities. So you might think, well, the level of crime in a city depends on the extent of economic opportunities in that place, for example, or it depends on the age structure of the population or racial composition or things like that. And so those are all relatively straightforward issues to address because we can measure them. And so we can ask after we adjust our regressions for those differences across cities and those observed characteristics, do we continue to see a negative effect of social connectedness on crime? And the answer is that we do.

**Bryan** [00:27:06] So, you know, we kind of go through a lot of different types of observable variables that you can think about. But again, you know, I think being, you know, fully fledged economists, we're not kind of convinced by that. And we still worry about selection on unobserved variables. And that's really, I think, the challenge here. So one story you might have in mind is that these migration networks helped black migrants move to places where crime rates were lower. You know, certainly information was passed through these migration networks and information about crime may have been important, although there's not a whole lot of discussion of that in the historical literature, a lot of that is just to focus on basically jobs.

**Bryan** [00:27:47] But nonetheless, we can examine this issue by digitizing some old FBI data and also some old Social Security Administration data. So we have estimates of homicide rates from the 1910s as well as from the late 1930s by digitizing these data. And we can ask whether or not social connectedness was higher in places that had lower crime

rates early in the 20th century. And the answer is that there's really no relationship there. So we don't see any evidence that the social connectedness emerged in places that had low crime initially. And that's important because if you think there was a story where, you know, some places are just inherently high crime or low crime, and those things are really persistent through all of the 20th century, you might have just worried that our results were driven by that kind of selection.

**Bryan** [00:28:41] But I think there's still scope that you say, well, maybe it's not about whether or not places where high crime or low crime. In the 1930s, maybe it was about whether they were high crime or low crime in the 1960s. And you could again worry that basically these migration networks just brought people to places where crime rates were lower. And so to address that possibility, we have what I think is kind of an interesting robustness test here, which is to use the fact that we've got we're examining crime between 1970 and 2009. And so what that means is that if you think this is all about the selection of these migration networks into low crime places, that if you were to say, control for crime rates around 1960, that could totally eliminate the relationship between social connectedness and crime in later years.

**Bryan** [00:29:34] Now the idea is all of this is about selection on place characteristics as of 1960. So there's no independent effect of social connectedness on crime in later years. And so we can use the fact that we've got many years of crime outcomes to basically see whether or not our effects are just eliminated when we control for those crime rates in 1960. And we find that it's not so, you know, these effects are somewhat attenuated or shrunk by that control, which is kind of exactly what we would expect. But at the end of the day, those results also suggest that this is not just about the selection of these networks into low crime places.

**Jennifer** [00:30:16] Right. You also do some work to consider potential mechanisms. So tell us a bit about what you do there and what you find.

**Bryan** [00:30:25] Yeah, absolutely. So, you know, going back to the mechanisms that we were talking about earlier, one thing you could imagine is that social connectedness just works to help identify criminal offenders. So it just makes it easier to know who was the person who stole from you on the street. Now, what we can use here is the fact that across the crimes that we examine, some of these crimes are more likely to have witnesses and some are less likely to have witnesses. So, for example, if there was an assault, there's going to be very likely at least one witness, which is the victim. Whereas in contrast, if you think about burglary or motor vehicle theft, you're less likely to have a witness. And so if the main mechanism here was about identifying criminals, you would expect to see these effects only operate on the crimes that have witnesses, but that is not what we see.

**Bryan** [00:31:20] So we see pretty similar effects across all of these crimes, which suggests to us that this isn't just about the community's ability to identify an offender. And what we do next is turn to think about some of the, you know, the labor market or housing stories that I talked about before. So one possibility is that the social connectedness would say lower the unemployment rate among black individuals by helping connect them to job opportunities. And you can partly examine that story by saying, well, after we adjust for the unemployment rate across these different cities, do we see the effect of social connectedness disappear? And you can do similar things by controlling for, say, the home ownership rate or the level of education in a community. During the 1980s, we also have some data on crack cocaine as well. And so those allow us to see whether those stories seem to be relevant and the evidence there does not suggest that those are really the key

stories. So if we adjust for the unemployment rate among black individuals across cities, we continue to see very similar effects, which suggests that that's not really the main mechanism.

**Bryan** [00:32:39] So so far, this kind of sounds, I guess, you know, somewhat disappointing, but I've told you a lot of things that are not the mechanism. This is where I think the supplementary homicide reports turn out to be really useful, because what we can see from those reports is that social connectedness especially reduces murders that occur during basically gang and drug activity. Social connectedness really reduces murders of young individuals. So think, you know, between the ages of 15 and 25. And we also see that social connectedness reduces murders committed not just by black individuals, which is what you might expect if this was just a story where, you know, elders in a community kept the kids that they knew out of trouble.

Bryan [00:33:28] If that was the story, you might expect just to see decreases in crime committed by black individuals. But we actually see decreases in crime committed by non-black individuals as well. And those decreases in murders are also concentrated in gang and drug activity. And so I think the story here is one where social connectedness is basically bringing this community out of what you can think of as like a bad equilibrium where there are retaliatory gang or drug murders, instead avoiding that kind of cycle of violence. Now that's really about, I think, like the indirect effects when we think about spillovers across gangs. We're still, I think, left with the question of, you know, what is it that parents and grandparents being connected does for youth in a community? And this is where, you know, I think drawing on some other work that's been done, we point towards things like non-cognitive skills or can think about young individuals ability to think through the consequences of their actions or to avoid basically aggression as a first response to conflict or difficult situations.

**Bryan** [00:34:38] So, you know, ultimately, we're not able to nail down mechanism precisely, but I think by process of elimination combined with some other really nice papers, that's where we think the results are coming from.

**Jennifer** [00:34:49] So what are the policy implications of all this? What should policymakers and practitioners take away from these results?

**Bryan** [00:34:55] The main thing that I think of here is that when we think about policies that affect community ties, and if you have policies that in particular weaken community ties, those types of policies could increase crime rates. So I think it's helpful, maybe to be specific, if you think about, say, the construction of highways in the United States, which tended to basically destroy and displace neighborhoods of African American residents.

**Bryan** [00:35:26] Those types of policies that break up communities could have negative consequences in terms of increasing crime rates. You know, I think people have also talked about mass incarceration as another example of this that kind of can weaken community ties, remove individuals from the community. Obviously, mass incarceration, that's kind of a complicated policy, but when you think about the community level effects of that, our results suggest that, you know, there could be consequences there.

**Jennifer** [00:35:55] Are there any other papers related to this topic that have come out since you all first started working on this study?

**Bryan** [00:36:00] So in a way, yes, I think in that, you know, social capital is there are new papers written about social capital on a daily basis. I think that's just kind of it remains a huge and really influential field within the economics literature. I think people have made the most progress in pushing forward the peer effects estimates that you described before. Now, I think the other interesting research that people have kind of been putting forward is thinking about granular levels of social networks and trying to identify who are the members of social networks that are really pivotal in generating positive outcomes. So, you know, who is the person in the network that can really influence outcomes? Folks haven't gotten to that in crime, but I think in thinking about the flow of information, that's I think been a really interesting area of work.

**Jennifer** [00:36:53] Yeah it's really interesting. And so what's the research frontier? What are the next big questions in this area that you and others will be thinking about in the years ahead?

**Bryan** [00:37:01] For me, I think the biggest question is whether or not policy can promote social connectedness in order to lower crime rates. So that's, you know, going back to like, why are people so excited about the idea of social capital or social connectedness? It's based on this idea that communities and social ties might be able to accomplish outcomes that otherwise are expensive for governments to do or come with a bunch of costs.

**Bryan** [00:37:28] So when you think about increasing the size of a police force, for example, that can be expensive along a number of dimensions. What our study doesn't answer is whether or not policy can promote social connectedness to a sufficient degree to reduce crime. I think they're it's really important to kind of keep in mind these social networks that we're studying, where these social networks emerged and were really forged with this process of black individuals making long distance, difficult, costly moves from the south to the north. And so you want to think about this, as, you know, really quite intense and quite strong social connections among these individuals that lasted for decades. You know, an open question, is there anything that policy can do to promote social connections? And to the extent that policy can promote those kinds of social connections. Is there enough of an effect there to actually influence crime rates?

**Jennifer** [00:38:28] Fascinating. I will look forward to reading those papers. My guest today has been Bryan Stuart from the Federal Reserve Bank of Philadelphia. Bryan, thank you so much for talking with me.

**Bryan** [00:38:38] My pleasure.

**Jennifer** [00:38:44] You can find links to all the research we discussed today on our website probablecausation.com You can also subscribe to the show there or wherever you get your podcasts to make sure you don't miss a single episode. Big thanks to Emergent Ventures for supporting the show and thanks also to our Patreon subscribers and other contributors. Probable causation is produced by Doleac initiatives, a 501(c)3 nonprofit, so all contributions are tax deductible. If you enjoy the podcast, please consider supporting us via Patriot or with a one time donation on our website. Please also consider leaving us a rating and review on Apple Podcasts.

**Jennifer** [00:39:17] This helps others find the show, which we very much appreciate. Our sound engineer is Jon Keur with production assistance from Nefertari Elshiekh. Our music is by Werner and our logo was designed by Carrie Throckmorton. Thanks for listening and I'll talk to you in two weeks.