Probable Causation, Episode 94: Jesse Bruhn

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 the director of the Justice Tech Lab. My guest this week is Jesse Bruhn. Jesse is an assistant professor of economics at Brown University. Jesse, welcome to the show.

Jesse [00:00:26] Hi, Jen. Thanks so much for having me on. I'm excited to be here.

Jennifer [00:00:29] Today, we're going to talk about your research on the effects of gangs in Chicago, but before we get into that, could you tell us about your research expertise and how you became interested in this topic?

Jesse [00:00:39] Yeah, so broadly speaking, my research agenda focuses on the education and crime, and I became interested in both those topics so so I worked as a public school teacher for a short time before pursuing my Ph.D. and so I think part of the interest in education comes from there. And then the reason I'm working in crime is sort of one of these idiosyncratic stories from grad school where no one in my department was doing education research when I when I first got there and so I sort of fell into some core crime data and there she goes from there.

Jennifer [00:01:10] Your paper is titled "Competition in the Black Market: Estimating the Causal Effect of Gangs in Chicago." So let's start with some background on Chicago. How much of a problem are gangs in that city and what role are they playing there?

Jesse [00:01:24] Yeah, so great question. I spent a little bit of time looking up some stats from the most recent year to prepare for the call. And so let me just lay it out for you. So in 2022, there were 688 homicides in Chicago that's a little over almost two per day. Three out of the four victims are black, 87% male, most victims in their early twenties. And I think, you know, we don't have good stats on publicly available on the number of these homicides that are gang related in Chicago specifically. But we know from some high quality research in Boston that something on the order of 70% of all shootings in that city involve either a victim or a perpetrator who is is gang involved. And I think knowing a little bit from the news and the press and just following this stuff in Chicago, you can imagine the numbers are similar. There's just an epidemic of gun violence in the city people are dying and I think much of it is gang related.

Jesse [00:02:21] Another stat I like on this, Sara Heller has some amazing work looking at gun violence prevention in Chicago and she's really Sara Heller and coauthors there's other folks involved in this work as well. And they're they're targeting sort of the highest risk populations for gun violence, many of whom are gang involved. And just, for example, nearly 12% of the individuals in her control group become a victim either of a shooting or are killed during the course of her study. So big picture, if you want to understand urban gun violence in America, I think you need to understand gangs.

Jennifer [00:02:55] Yeah. And I had Sara and Max Kapustin on the podcast a little while ago to talk about that study of READI. And so we'll put a link to that in the show notes so folks can listen if they haven't already. So what had we previously known about the effects of gangs in the U.S. and in other countries?

Jesse [00:03:11] Yes, I like to think of the literature here as being broken up in kind of two dimensions. So there's sort of what I would think of as, you know, wealthier studies that have been conducted in sort of wealthier nations and studies that have been conducted in sort of like lower income countries. And then I would say there's descriptive and causal work. And I'm also going to frame this answer really in terms of like quantitative I should also acknowledged there's been a boatload of fascinating sort of sociological and criminological work that sort of sort of takes an ethnographic lens to the study of gangs. But in the quantitative sphere, those are sort of the margins that that I think of. And I think, you know, sort of internationally and like sort of, you know, low to middle income setting, we are starting to develop a pretty rich body of causal work on how gangs affect the outcomes, both of the communities where they operate and the people who live sort of under their rule.

Jesse [00:04:09] So I know you're familiar with the work of Mica Sviatschi and Chris Blattman and Santiago Tobon and all those folks, and they find things like growing up inside gang territory in areas that are exposed to organized criminal activity. These kids are more likely to become criminally involved themselves in in South America, communities that are under gang rule tend to have lower levels of economic development than otherwise observable, similar communities that are just outside gang rule. And so I think we have now a pretty compelling body of evidence there that is both causal and descriptive. I think we where where we are much more limited is on compelling causal work of that nature in more well-developed country settings.

Jesse [00:04:53] So in the US, for example, there's there's tons of descriptive work and a sort of a small body of evidence, like classic studies from Levitt and Venkatesh looking at the outcomes of kids who grew up in housing projects that were involved with gangs. And you're starting to get a body of causal work really around policies meant to address gang violence. You sort of have Aaron Chaffin and Emily Owens and Jeff Grogger about them work on gang injunctions in places like L.A. and New York, but there's really nothing comparable to what folks have done in the developing world when trying to understand what the gangs themselves do to the individuals and communities that they where they operate. And so really, I think of the paper we're going to talk about today is trying to kind of start to fill that gap.

Jennifer [00:05:36] So why does that gap exist? What makes this so difficult to study? Has the hold up been mostly data or mostly good natural experiments?

Jesse [00:05:44] It's so funny when I talk to economists about this, because, as you know, economists are obsessed with causality. And in most literatures, I think the core questions or the core approaches that or the core things that limit our scientific understanding are finding compelling sort of like treatment and control groups. You know, the questions are often like, can I run a randomized controlled trial? If not, can I find some comparison in the data that can tell me approximately what would happen to an individual if sort of the treatment or the social policy had never happened? I think the state of the literature on gangs in the U.S. in particular is even further behind in the sense that often it's not about finding the right treatment control comparison, it's about finding any data at all that lets you have comparison of interests. You know, for obvious reasons. I think the individuals involved in criminal activity, you know, they're not excited to share their data with me. And then police departments as well can be difficult and tough to crack.

Jesse [00:06:46] They often have some data and say, no, that data has its own challenges. You want to be careful with how you interpret it, but can be reluctant to share it

with researchers, especially on topics as sensitive as gangs where there may be sort of political, you know, and ramifications from the public depending on on what the data reveal. And so I think that's really at its core how I was able to write this paper and make this contribution or what I hope will be a useful contribution was by doing some legwork to obtain some some novel data on gangs in the city.

Jennifer [00:07:18] Yeah. So you were able to obtain really cool data on Chicago gangs to shed more light on the effects of those gangs on local crime and other outcomes. So tell us about those data and more importantly, especially for the researchers out there tell us about your four year battle.

Jesse [00:07:34] Okay. So maybe I'll just I'll just start by saying a little bit about the data itself. So what I have is a series of maps that were produced by the Chicago PD one every year from about 2006 to 2018 that describe the boundaries of gang territory in the city. Now they produce this data for their sort of internal operational purposes, and I learned of this data and its existence while writing the first paper I ever wrote in grad school. I thought it sounded amazing and would be fascinating to work with to to study gangs in the city. And so I started submitting FOIA requests to the to the Chicago P.D. and I guess maybe understandably, maybe not understandably, depending on where your thought process is, on how open police department should be with their data. They were not excited to share the data with me.

Jesse [00:08:27] I think they probably I just got in the habit of like sending them a FOIA request for this like once a month, just thinking like maybe something would change. Or if I asked for it in a slightly different way, maybe the like sort of nonsensical excuses they gave me would would evaporate and so honestly Jen for about a year and a half, I just submitted FOIA requests over and over and over again and finally got to a point where I learned I could actually appeal the FOIA request to the state attorney General's office. And eventually, through this process, they coughed up the data on the gang maps, actually shortly before I hit my job market so I wasn't even able to dig into it that much until after my job market was over. But also out of this FOIA battle, there was some additional data I wanted that they were still reluctant to give me.

Jesse [00:09:11] I eventually contacted a law firm in the city, Loewy and Loewy, who agreed to represent me pro bono in a lawsuit against the Chicago PD that has since been going on to this day. So maybe for the grad students out there, if you want tips on suing public agencies for data, I have a lot of a lot of knowledge of how that process can go. Just don't count on it in time for your tenure.

Jennifer [00:09:34] That's right.

Jesse [00:09:35] We finally went to trial like two weeks ago. My lawyers were very excited.

Jennifer [00:09:39] Oh wow.

Jesse [00:09:39] Because apparently the first time a FOIA case they'd taken had gone to trial in like two years or something and we should learned that we had a two day trial. And so we should learn the outcome of that, that trial, I guess, sometime in August. I don't know why it takes the judge so long to make up his mind, but.

Jennifer [00:09:53] Oh, my gosh, that's amazing. This is reminding me of a FOIA request that I submitted back as a assistant professor many years ago now also to Chicago to try

to I was trying to get their ShotSpotter data and so submitted a it wasn't even it wasn't even like a systematic I'm going to send a request every month. I think I partly was just like I hadn't heard from them. And I was like, oh, maybe I didn't submit a request to Chicago yet. And so I like submitted a couple of requests and finally someone from the police department called me and left a voicemail on my office phone saying, "we've been getting your FOIA request, we're never giving you this data, stop sending or else." I was like, okay, I guess I'll do something else.

Jesse [00:10:31] That's amazing. Well, now the the acoustic gunshot detection data for Chicago, maybe because of the consent decree is on their open data portal so.

Jennifer [00:10:38] Oh amazing.

Jesse [00:10:40] If you wanted to get out there for free. Now, I'll see if the grad students listening are interested. I think my model of the FOIA process I've done a lot of these over the years is basically like the person answering the FOIA request is like, you know, they wanted to be a police officer and something happened and now they're answering FOIA requests and their objective function is actually I actually think most of them don't really care that much. I think they make you go away as quickly as possible. So the easiest thing to do is to say no. So they send me documents that clearly filled someone else's FOIA request but that I didn't ask for and then tell me that they've fulfilled my FOIA request. And so I think sometimes it's just a little bit about being persistent and you get lucky and sometimes you get like the right officer on the right day and they'll go do a little bit of extra legwork to get you what you're looking for and then other times you have to take them to court. And that's kind of where I'm at right now so.

Jennifer [00:11:33] Yeah, you do mention in the paper, I think that, you know, you continue to submit requests after they sent you stuff that was like clearly not a map, like you were asking for maps they sent you, not maps. So you kept asking.

Jesse [00:11:47] They sent me stuff that I mean, I was shocked. I don't you know, stuff that I would think would be even more sensitive than the maps I was asking.

Jennifer [00:11:56] Oh, well, we'll have to talk more about the court case then another time. But um.

Jesse [00:12:00] Yeah, it's been it's been it's been wild. I hope I do not have to file another lawsuit, at least. It's definitely not going to matter for my tenure case if I do.

Jennifer [00:12:09] Yeah.

Jesse [00:12:10] But at the other day. You know, my feeling on this stuff is that, like the taxpayers are paying to generate all this data.

Jennifer [00:12:16] Yes.

Jesse [00:12:16] And I don't really understand why the Chicago PD or any police department should be the final arbiter over who in the community and in particular the research community gets access to that data to learn from it. And I worry that this kind of filtering that happens can skew the perspectives about law enforcement in the criminal justice system that make it the public discourse. And so, you know, to the extent that we have researchers, especially grad students who are hungry for data and willing to go the

extra mile, I think we can get that perspective out there. I know like Roman Rivera and Bocar Ba have done a lot of work in similar style work, trying to get data that the Chicago PD didn't want to share or shed light on various aspects of the criminal justice system and I just think that work is incredibly important. And maybe, you know, pie in the sky one day we can get some some legislation that'll make it a little bit easier. So, you know, my my lawyers are going to have to spend all this pro-bono time helping me out.

Jennifer [00:13:18] Yeah. No, it's fantastic. They did this pro-bono. Yeah. No, I have similar feelings about things that seem like they should obviously be public record for a while I was I, you know, had this army of RAs that were submitting public records request for ShotSpotter data in various cities because, you know, the firm said no, this private data, the cities are going along with that, saying it was private data. And it seemed obvious to me that these data should be public record and just felt like a bad precedent to just let them get away with it. So.

Jesse [00:13:45] Well, thank you for your FOIA requests, because I have because again, I have a paper using the data that came from your website so.

Jennifer [00:13:53] Oh amazing. Oh, good.

Jesse [00:13:54] Your public good has directly affected my career, so I can't thank you enough.

Jennifer [00:13:58] Excellent. It was worth. It was worth something. I'm glad to hear that. Okay, let's talk more about these maps. So. So one question that folks might have is whether we should trust these maps. And you did dig a bunch into that. So.

Jesse [00:14:12] Yeah.

Jennifer [00:14:12] You got these maps eventually and just how did you decide that they were pretty accurate?

Jesse [00:14:18] Yeah. So I did a number of things, so I can't remember. So the actually the version of the paper that's on my website, it's not totally up to date. I've made some efforts on this since that, but so I've done some quantitative stuff to verify them. So if you kind of like go down the Chicago gang rabbit hole on the Internet, you can find some communities of people that just like collect, you know, gang folklore in like chat forms and stuff. And I was able to locate sort of like a crowdsourced map of gang territory in the city that was sort of like a community contributed. And I can kind of check whether, you know, in a systematic way, statistically, whether the map that comes from this crowdsourced information lines up with the maps that the Chicago P.D. provided me and they are quite highly correlated. So that's one data point.

Jesse [00:15:04] But I also spent some time I found a a freelance journalist who had sources both within the CPD and gangs in Chicago who had written on this subject. And he was very excited to show me around the city and conduct a series of field interviews. So in fall of 2019, which feels like ten years ago now, after the pandemic, I spent four days in the Austin and North Lawndale neighborhoods of Chicago interviewing gang members, spending time at illegal drug markets, talking to police officers and members of the community. And I found that just, you know, again, this is all anecdotal. I found that understandably, the data system within the Chicago PD that houses these maps has a terrible reputation among the community. The belief in Chicago is that among the people

that I talk to is that the data collection practices of CPD are basically just informed by, you know, strong racial biases. So almost to a person, when I when I asked someone, you know, I told them about these maps, the reaction was like, oh, these there's no way these are accurate. I found, though, that when I would actually show people maps of the neighborhoods where they lived, their reaction would sort of moderate a bit and they would say, well, you know, like I still think, you know, the Chicago P.D. has these racist data collection practices, but like, that is kind of the gang that sits on the corner outside my building.

Jennifer [00:16:29] Somehow they got this right yeah.

Jesse [00:16:31] Yeah. So they got the government got it right in one neighborhood. The other thing I found, too, and again, this is maybe just something that is not easy to understand if, if you have and I hadn't spent time in a community with gangs until this and so it was new to me. But the gangs are not trying to stay hidden. The gang members I spoke with in the neighborhoods I was walking around in, there were open air drug markets, and it was not hard to infer which groups were controlling the areas that I was walking through based on the way they were positioning themselves within the neighborhood. Like the boundaries are just not a secret and are very well known to the people who live there, and especially to the gang members whose very life and limb can depend on knowing where the boundary of one gang ends and another begins.

Jesse [00:17:21] I can say also, Jen, that I have a follow up paper I'm writing with my coauthors, Chris Campos, Eric Chen and Jessica Wagner that's obtained similar data in Los Angeles. And then, you know, again, we can extrapolate, I guess, a little bit from Los Angeles to Chicago, but just to highlight how salient these boundaries are to people. I recently conducted a series of field interviews out there trying to do a similar validation exercise, but now that in all the things my referees are going to complain about, I did it in a much more systematic way for this paper. So I did 30 field interviews over about four days in February, and at the end of the interviews we actually developed a shiny app where for the gang members and community members who were willing, they could type in like a cross street in a time period where they were familiar with gang territory.

Jesse [00:18:11] It would query Google Maps, show them the street view, and then overlay the gang polygons on top, and then they could click the polygons and record whether the polygons seemed accurate or not. We got them, 16 of them, to do the field survey. They clicked on 67 polygons and we found that 80, they listed 87% as accurate. And even in the 13% that were not accurate, there was like a comments field. And frequently the comments were things like, well, actually the boundary stops at 16th Street, not 15th Street, which if anything, gave me more faith that the data is picking up something real because it just shows you how concrete the boundaries are in these folks mind.

Jennifer [00:18:56] Hmm.

Jesse [00:18:57] So anyway, I don't mean to do a diversion into L.A., but I like that as a data point for this understanding. You know that these maps are like a real concept that people respond to, and that just because they are so important to in the day to day lives of the people who live in these neighborhoods, you know, it's sort of unsurprising that Chicago PD that is also patrolling these areas, that is also talking to people, that is, you know, they have confidential informants that they are also able to, with a reasonable degree of accuracy, learn where these boundaries lie.

Jennifer [00:19:26] Yeah, that's really interesting. And then beyond these maps, you also had other data, you know, most excited about the maps and the FOIA battle. But you also had other data on, I think, gang databases. Tell us a little bit about the other data that you wound up using for this paper.

Jesse [00:19:41] Yeah, absolutely. So the gang database that all this data gets warehouse in in the Chicago PD servers over this time period was in the news and so there were actually a lot of journalists who were also, you know, submitting FOIA requests and trying to figure out what was going on in the gang database. And thankfully, a lot of them, you know, make those data products public after they write the article. And so I downloaded, for example, I have a spreadsheet that contains actually, the origin of the spreadsheet is using this as part of an input into a gun violence prediction program. But basically, I can see everyone who was arrested anonymized, of course, what they were arrested for and whether they were sort of victimized by gun violence or had been involved in gun violence and whether or not they're suspected of being a gang. So I can get something very coarse, you know possibly you know, again, you have to be skeptical of everything you get from the police and treat it with a great deal of care. But a sense of like what a gang member looks like, what they're being arrested for, what kind of crimes they're involved in relative to what, like an average person who's arrested looks like.

Jesse [00:20:46] I also got some data on property values in Chicago from the Chicago multiple listing service, so I can look at how gangs are, you know, gang presence is translating into home prices and sales. And then I also got some crime data from the Chicago Open Data portal basically, I can see every crime that was reported to the Chicago P.D. over this period. And I can see the location and timing of when it happened and so I think those are the big inputs to the paper.

Jennifer [00:21:14] Okay, great. And so what do the gang members in your data look like descriptively and what crimes were they typically arrested for?

Jesse [00:21:21] So descriptively within this dataset, and I think this is what I do want to chew with a bit more care because this is one that I obviously, you know, could not validate in quite the same way, but within this spreadsheet, at least according to Chicago PD, of the individuals who were suspected of being in a gang, they were very likely to be involved in gun violence. I think what most people don't quite internalize when they hear that, I think people understand that gang members are involved in gun violence. But the degree to which they are both victims and perpetrators has always stood out to me. So, for example, in this data, I see that 7.1% of the gang members have been victimized by a shooting and 19% have been arrested for some form of gun violence themselves.

Jesse [00:22:10] In addition, especially compared to the average person who's arrested over this period, they're extremely likely to have been arrested for some sort of narcotics violation. Nearly 30% of the individual suspected gang members had been arrested at some point in time in the past for a narcotics violation. Again, just consistent with what I observed on the ground and what you hear talking to people in these neighborhoods, which is that you can kind of think of the gangs, at least the ones that are on the street that I think are, you know what the maps are kind of reflecting as really being heavily involved in the retail drug trade. I think of them as like the consumer facing side of this enormous global industry.

Jennifer [00:22:52] And so with these maps, what does the geographic distribution of gangs look like in Chicago and how has it changed over time?

Jesse [00:23:00] Oh, great question. So so this is actually one of the things that I found the most fascinating when I first started digging into the maps. So I think when you hear about, like maps of territory, I think typically that, you know, something that the image that pops into your head, you know, is like a globe or like a map of the United States where you kind of have like these neatly carved out divisions and the Chicago gang maps look nothing like that. The kind of technical term we would use is that they're non convex. And what I mean is that you will have sort of like patches of of territory of a gang. But then even with inside, that patch of territory will be small dots of territory belonging to a gang that has historically been a rival with them. And so, you know, in talking with people, reading some of the sociology and criminology about this, I think this really reflects the degree to which gangs and the gang members themselves are sort of like have deep connections to the communities where they operate and where they grow up.

Jesse [00:24:02] So some of the work in L.A. I didn't ask about this as much in Chicago, so, you know, if you don't mind me talking about a bit about gangs in L.A. as well, they asked people questions about like how they became involved in gangs, what was the origin of their pathway into this sort of criminal lifestyle and oftentimes it was driven by like family connections. It was like, you know, my cousin lived on the other side of town and joined this neighborhood. So when I got up to be about that age and I was noticing the gangs in my neighborhood and maybe feeling intimidated or whatever, I decided to join my cousins gang can now me and my friend group, we're in our neighborhood and we have our own gang that can protect us from the dangers we see around us. That's kind of how you end up, I think, with these these sort of like tiny sort of wild patchwork of gang fabric that sort of overlays on the city of Chicago.

Jesse [00:24:51] The second thing that is quite striking and you sort of I think this was in your question about how it changed over time, it turns out that there is a decent amount you know, these are not at least in the Chicago context, these territories are not static. So in an average year in the data, I see about 50 gangs and of those in a typical year, 29 will see their boundaries of their territory shift in in some capacity. Now, it's not like these gangs are just kind of, you know, shifting and roaming around all over the place. When a territory does change hands or does change from no gang to gang, it tends to persist for a while. But it suggests that, you know, the territory is such an active concern, an important part of what it means to be in a gang, that the gangs themselves are constantly finding places to expand into or leaving places where maybe they're being driven out of. So those are sort of the two sort of I guess in econ speak we call them stylized facts that really spoke to me from the data as being being interesting and important to document.

Jennifer [00:25:59] And it sounds like these stylized facts are pretty consistent with the previous qualitative and ethnographic work on Chicago. Is that right? Or were there some surprises?

Jesse [00:26:09] You know, in some ways, a lot of this project was really just about taking things that the ethnographic work that the sociologists that the criminologists had been documenting and saying for years and trying to put numbers to those lived experiences, those patterns that they recognized on the ground. And so I think a lot of what I found was not surprising in that sense. Like if you actually read, for example, Roberto Aslam's book on gangs in Chicago or the I forget his first name I think it's Robert Vargas has a great book on gangs as well. If you're you're reading these authors, I don't think it was that surprising, but I think for just like the typical person on the street who like myself, was not

as invested in gangs prior to working on this project, I think these facts are quite novel and interesting.

Jennifer [00:27:05] Yeah, it doesn't always work out that the data will line up with the more qualitative work, but it's nice when it does. So we do hear that in this case. Okay, so you're going to use the changes in gang territory that you talked about as a natural experiment that allows you to measure the causal effect of gangs entering particular neighborhoods. This is an econ paper, so you need a causal element. This is your causal element. So tell us a bit about how you do this.

Jesse [00:27:33] Yeah. So basically the way I think about causal inference is that I'm always trying to find some comparison I can make in the data that's going to tell me what the folks who are exposed to the treatment, who took the pill, who got the policy, who got the gain, what would have happened to them if that treatment had never happened. And so the trick in this paper is that, you know, where the gangs are located are not random. They are, you know, lower SES neighborhoods, there's stark racial divisions Chicago's one of the most segregated cities in the United States, and that turns out to be correlated with both the SES and where the gangs are operating. And so I needed to find some way to dig through this data and find a comparison that I can make that would be compelling in terms of telling me what would have happened to the folks with the neighborhoods, with gangs if the gang had never gotten there.

Jesse [00:28:30] So what I settled on was using the fact that the boundaries of the gangs change over time and so what I can do is I can take two blocks in the data, two city blocks in Chicago. And I know that at some point in time, say 2010, Block A is going to have a gang enter them and block B, which looks similar on its observable characteristics, is not going to have a gang enter them. And then what I can do is I can compare the trajectory of these crime and home prices in these blocks over time. So I'm not going to just compare them 1 to 1 in a single year. I'm going to look at how they are trending before the gang entry event when I know that neither block has a gang in them and then what happens in the immediate aftermath of that event. And sure enough, what you see is that as soon as the gang entry happens to block A, you see sharp declines in property values, the likelihood of a home being sold, sharp increases in the number of violent batteries, particularly those that involve handguns, large increases in the number of narcotics violations being detected. And interestingly, declines in the number of robberies, again, may be consistent with the idea that what the maps are picking up are gangs operating these drug markets.

Jesse [00:29:50] You know, I think, you know, robberies are bad for business when you're trying to attract customers, even if the product you're selling is drugs. And so we see all these changes happen in the block that gets the gang entry event around the time the gang entry happens in a way that never materializes in the comparison block. And so this strategy, as you're well aware, and many of your readers will know, is called a difference in difference. And it relies on the idea that the trajectory in the block that doesn't get the gang, the trend over time is a good counterfactual tells me communicates to me what would have happened in the block that did get the gang entry event if the gang had never decided to go there.

Jennifer [00:30:30] Yeah. And so having these comparison groups, these comparison blocks and being able to look at the pre period trends, so what happened before, these are like basically matched in the pre period, essentially kind of helps you rule out the possibility that gangs are actively choosing where to go because like maybe crime was already

trending up there and they're like, great, that's a great opportunity for us. We like crime, you know, and they go somewhere where the crime is already going up and then it looks like they caused the crime when they were just reacting to it.

Jesse [00:30:59] Yeah, exactly. If you thought it was something about a long run, like a question I get a lot is about like gentrification, for example. Like if you thought that some neighborhoods were like, declining in their economic status and that kind of like invites a gang entry, I would expect that to show up prior to the gang entry event and, for example, different trends in home prices. So what makes this design compelling, I think, from a causal standpoint is the fact that when I look prior to the gang entry event at things like home prices or the number of violent batteries, they look to be trending fairly similarly, which suggests it's not some third factor that's pushing both, you know, property values and the gangs to enter. I'd suggest that the kind of the timing gives us confidence that it's the gangs themselves that are that are that are causing the changes.

Jennifer [00:31:51] Yeah. So when we think about I mean, in an ideal world, this is like essentially random, right? They at least the timing of when they're moving into which of these blocks and which of the blocks they're choosing. And so as a story we, we should have in mind here for where that that randomness comes from akin to the story you told earlier where, you know, someone joined their cousin's gang or their or their brother's gang or something, or is there something else that we should have in mind, too?

Jesse [00:32:16] Yeah no, that's that's a that's a great question. So I think oftentimes when you're trying to understand whether a research design is giving you credible estimates of the causal effect of the policy or treatment you have in mind, you want to understand what's driving the changes in the treatment variables. And in this case, it's a little bit of a black box in the sense that like, you know, I'm not on the ground in Chicago watching these gang expansion events, as I call them in the paper happened. But, you know, talking to some folks in these communities and just trying to understand why gangs expand and contract their territory, it seems to me like there were a few key reasons. One, oftentimes law enforcement will target particular gangs and, you know, try to like arrest the leaders or break them up if they're getting too violent. Two gangs war with one another. And sometimes, you know, gangs will be decimated in a way that creates a vacuum and invites another gang to enter. And in both those cases, I intentionally exclude those possibilities from the data. This is why I only look at gangs that are entering blocks that don't already have a gang. And so I'm trying to rule out those stories by just kind of throwing out those kind of comparisons from the data.

Jesse [00:33:33] And so then what drives that sort of last mile of gang entry? I think it's stories like the one I told earlier, you have, you know, people don't and I'm sure you're aware, but people may not realize that individuals become recruited into gangs at incredibly young ages. You know, in some of my field work in L.A., I found people who became gang involved as young as like eight or nine. I think a more typical age is like 12 to 14 is when people get jumped in. So I think you have groups of kids that are kind of like aging into crime together in these harsh urban environments that at some point get jumped into a gang this kind of discrete switch goes off and decides to open up these drug markets as a way to scratch out an income. And once they make that decision, they need to find somewhere to operate that is not really stepping on the toes of of a more established gang. So that's why you might get these these gang entry events.

Jesse [00:34:21] I will also say in the paper Jen maybe this is again, it's it's not quite up to date on my website. I've done another kind of treatment control comparison that uses that

the timing of when public housing projects are demolished in the city as what we in the Econ world would call the instrumental variables. So that's like a third thing you can observe that plausibly affects the treatment of interest without otherwise affecting the outcome. And I have to be careful about this because the demolitions themselves, there's reason to believe they might have also directly affected the outcome. So I'll spare you the details on how I try to turn this into a compelling research design. But I do also implement strategies that leverage the timing of these public housing demolitions and find their much needed noiser by that I mean less they're estimated with less precision. I'm less confident in the particular numbers I get out of that exercise, but they're broadly similar to what I get using these sort of gang entry events that I described earlier.

Jennifer [00:35:19] Okay, great. Very interesting. Okay, Let's talk about the numbers. So when a gang enters a new neighborhood, what happens to local crime rates?

Jesse [00:35:27] As you might imagine, violent batteries go up and narcotics violations go up, robberies go down. As I previewed earlier, you can kind of the crime data, the spreadsheet I get that contains the data also has a column called description that contains basically like these very sort of like erratically written sentences or key words about what the actual crime was that happened. So I can also do some like loose categorization based on these descriptions that really suggests, for example, the violent batteries are coming from like incidents with a handgun. You know, the narcotics violations are really coming from like cocaine and cocaine derivatives, you know, again, consistent with the idea that it's really these groups of kids really operating these illegal markets that are driving things.

Jesse [00:36:14] And I also say if I didn't mention it earlier, I do find sort of large declines in property values. I believe the point estimates are about 1800 dollars consistent with the idea that, you know, the gangs are not operating in secret. And so I just would imagine that if I'm thinking about buying a property in one of these neighborhoods and I can see a gang visibly out there, I'm probably less excited to pay top dollar for that house.

Jennifer [00:36:39] Yeah. I think it's also in line with I mean, economists love using property values because we have this idea that, like everything about the neighborhood should be priced in. Right. So like, we can't we can't see, like, exactly how safe people feel or we can't really measure or quantify how safe people feel. But you're going to be willing to pay less for a house in a neighborhood where you feel less safe and so how much less then becomes the question. And so that that property value number you got .

Jesse [00:37:07] Yeah another another nice thing about the property values. Again, if you don't want to bore your reader or your listeners too much with the the kind of nitty gritty of the research design.

Jennifer [00:37:16] Let's do it.

Jesse [00:37:18] Yeah, but you know, there's something nice about property values here too, because that is data. I also use some data from the census as well that has this feature. But, but that is data that does not live inside like a Chicago P.D. computer system.

Jennifer [00:37:30] Yes.

Jesse [00:37:31] So if you're worried that there is something like a little bit weird going on within the CPD computer systems where maybe they're using crime to figure out how to move the maps or something like this?

Jennifer [00:37:41] Mm hmm.

Jesse [00:37:41] You know, I can I can say that at the very least. You know, the the Chicago P.D. is not going down to the public records office and, like, devaluing property transactions in conjunction with when they move the maps. And so I think it's reassuring from my perspective that we find something sensible and consistent there, that it's not all, you know, something about CPD that's driving things. It really seems like it's something about the gangs.

Jennifer [00:38:06] Right. Right. If we thought there's something like a change in the reporting of crime, but crime hasn't changed or something. Right. Okay, great. Good point. Okay. You run a bunch of additional checks, as one does, to rule out various alternative explanations for the main effects for changes in crime rates in particular. So tell us about some of those various checks and what they tell you.

Jesse [00:38:28] Yeah, great question. So I do a whole bunch of robustness in the paper. I think some of the key ones I think I've kind of already highlighted. I view the property values as an important robustness check. The fact that I have this, these public housing demolitions, this kind of other way of trying to capture the causal effect of gangs and I get similar things is quite reassuring. One thing I didn't talk about is what we refer to as spatial displacement. So you might imagine that when a gang enters my neighborhood, it may be that they don't commit all the crimes in a really highly local area. They may spill out into other parts of the neighborhood that are sort of like not in my sort of what we would call like a unit of observation that's not captured in my data or that, you know, they displace other types of crime. Like if I'm running a small scale illegal drug operation that's not involved with a gang and some of the gang interest my neighborhood, clearly I'm not going to be able to sell on that block anymore maybe I go somewhere else. So I'll try to get after those these spillovers.

Jesse [00:39:24] I also estimate versions of the research design that look at much higher levels of geography and I'll say there I find broadly similar patterns. The one outcome where I get something different at a higher level of geography than a lower level of geography is homicide at the lowest levels. I don't see much of an effect on homicide, but I do see a substantial effect on homicide at a higher level of geography and I think this is potentially due to the fact that homicides may be more prone to these kind of geographic displacements. You know, if I'm operating an illegal drug market and I have a rival gang member that I plan to kill, I probably don't want to d that in the area where I'm trying to run my business.

Jennifer [00:40:08] Or he might. He might not walk up to you in that neighborhood.

Jesse [00:40:11] Yes.

Jennifer [00:40:11] Where you run your business. You have to go find him somewhere else.

Jesse [00:40:14] Yeah. Yeah. Or they might. They might find me coming outside of my parent's house or something because I'm maybe less on alert there if someone's trying to track me down. So.

Jennifer [00:40:23] Yeah. Okay. So what are the policy implications of these results? What should the policymakers or practitioners who are listening take away from your study?

Jesse [00:40:33] Yeah, this is this is actually a question that I think about a lot, because when I think about like why we do science, why we do research, I think oftentimes I have an instinct that I that I want to be able to say something super concrete out of every research project they take on, but I think some of the you know, I think there's a role for science to just generate basic understanding and so I think of this study as being more in that category. Like, I don't think any policymaker was arguing that things were good before my paper came out. Right. Like, I think people understood that gangs were a negative influence on these communities. But I think what my what I hope my paper does is sort of bear witness to how gangs are influencing these communities, puts numbers that can allow policymakers to quantify those impacts and perhaps catalyze action. And I just think that by trying to understand the world better, by increasing our awareness of, you know, what Xs cause Ys and how those translate into outcomes and inequities, especially in these kind of urban communities, are going to build a body of knowledge that allows us to work towards long lasting and sustainable solutions.

Jesse [00:41:54] And so when I'm asked about the policy implications, like I can have a cop out answer and kind of say something about cost benefit analysis or whatever, but if I'm sort of if you give me the truth serum on why I think this paper is important and interesting, I just think that understanding, you know, why some communities are wracked by gun violence and poverty, what are the factors that drive that and bearing witness to those inequities can help move the dial on these important conversations and policy and that's my best answer to that question.

Jennifer [00:42:26] I agree with all of that, and I will add to it. I do think that, you know, while you're you're surely right that no one or very few people are arguing that gangs are good. I don't think it's obvious, really how much worse they make things right like if you do have this story in your head that, like gangs are operating in communities that are already disadvantaged, they're already have high crime rates, you know, how do we know that they're actually causing some of this disadvantage in crime versus just thriving in it? Right, or something like that? And so you're showing causally that, no, they are actually increasing crime. And I do think being able to quantify the impacts on property values, jokes about economists aside, is really useful here, right. Like, I mean, this is something like you can put a number on the economic impact in that local community of that gang entering this block instead of that other block.

Jennifer [00:43:18] Right. You're seeing property values fall. And that's something that I think can really help us kind of wrap our minds around what the net effect of this is in a context where, yeah, you're seeing some, you know, especially when you aggregate some evidence that it's increasing homicides, which is what we all imagine from TV, but most of the impact is like an increase in in drug sales. Right. And so it's like, well, how much does that really matter? And it seems to matter a lot in terms of like you're seeing the impact on property values people do not want to live there anymore. So I do think that, you know, measuring those causal effects again, probably right, that it's probably not changing people's priors about like are gangs good or bad. But the policy implication is still gangs

are bad, but we have a new understanding of how bad and then also a new baseline for trying to figure out, like if the next step is what to do about it right a kind of a question could be like, well, you see gangs enter in this kind of context versus this kind of kind of context, or we have some sort of intervention to try to reduce the influence of gangs. Do you see these effects right, that shrink in some way?

Jesse [00:44:29] I think you're absolutely right. And one of my favorite things about talking about research, both especially my own research, is I learned so much from hearing how other people understand and interpret the findings in the data. And my plan, whenever this podcast comes out, is to steal everything you just said in conclusion of my paper, because that is exactly why this is policy relevant a.

Jennifer [00:44:54] Rguing in the conclusion. So so thank you for that. Happy to help. What other papers related to this topic have come out since you first started working on this study many years ago?

Jesse [00:45:05] Yeah. So I think the closest paper that I've seen has been Jessica Wagner's job market paper, who I am now working on several projects, exciting projects with, where she examines the effect of gang injunctions on student outcomes in a large urban district and so I think it's been exciting to see, you know, more compelling and interesting causal work, you know, peaking underneath the hood of gangs in the United States rather than continuing to rely on kind of the data that's coming from other parts of the world.

Jennifer [00:45:40] And what's the research frontier? What are the next big questions in this area that you and others will be thinking about going forward?

Jesse [00:45:46] This is a great question. So I think there are kind of like three things that have been on my mind. So if you read the literature on gangs, both in the US or organized crime in general, both in the US and internationally, there is just so much variety in what I would call the Industrial Organization of Criminal Activity. You know, you have gangs in the United States which tend to be these kind of like small groups of kids that don't have a lot of like command and control or like vertical structure contrast that with the cartels in South America that sort of exhibit an enormous amount of like hierarchy and leadership versus like the Mafia in Europe that also has a similar vertical structure, but oftentimes influences or the way they generate their income is through like public corruption and, you know, like bribing officials and procurement auctions. And I just think we have no idea why the structure of organized crime is so different in different environments. I don't think this is a question that I don't think we have even a good descriptive or rough idea of why these things change or why these things are so different in different places and then even within a given place, why they might change over time. So that's one.

Jesse [00:47:05] Another one that I've been working on a bit with Jessica and a grad student here named Jake Fabian is on understanding sort of the origins and persistence of criminal institutions. So it's like if you look at, for example, in Chicago where we're doing this new study, they've had gangs in Chicago since the late 1800s. There's a sociologist named Frederic Thrasher, who was part of his doctoral work, spent time mapping gangs in the city in the 1920s, shortly after a series of race related riots that happened that involved a lot of gang violence over that period. And at least what we find is that we zoom forward to today something like 67%, maybe even a little more trying to remember the exact number of the neighborhoods that had a gang presence in the 1920s continued to have a gang presence today. And this is despite the fact that over this intervening period, the 100

years between 1920 and 2020, there was this enormous amount, this radical demographic transition as Southern African-Americans migrated north and then subsequently the white sort of Italian and Irish immigrant communities migrated out of the city. And so you have this wild demographic change and the gangs changed demographically over this period, but yet the neighborhoods themselves, the places where these criminal institutions where gangs are operating, persisted through all of that. And so trying to understand why, I think is where my mind has been lately. So those are the two two things that popped into my head.

Jennifer [00:48:46] Fantastic. Well, I look forward to reading all of those those future papers where you answer all those questions. My guest today has been Jesse Bruhn from Brown University. Jesse, thank you so much for talking with me.

Jesse [00:48:58] Thank you so much, Jen. It's really been a pleasure to be here. I appreciate you having me on.

Jesse [00:49:07] 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 patrons, 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 Patreon or with a one time donation on our website. Please also consider leaving us a rating and review on Apple Podcasts. 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.