

THE BROOKINGS INSTITUTION
FALK AUDITORIUM

BPEA Fall 2026 Conference – Day 1

Thursday, September 24, 2026

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STEINSSON: Okay. So, We should get started soon. I think everybody basically has filed into the room. So, our next speaker is Jens Ludwig. Take it away.

LUDWIG: Great. Thanks very much. I'm gonna be talking about what happened to macro trends in crime since 2019 and whether we can make any sort of sense of why that happened. This is not the sort of thing that crime economists normally work on, but it seems like an incredibly important question, so we'll see if we can make some, some progress on this.

So let me start off by showing you the long-term time series in murder rates per hundred thousand people in the United States. Most of you are probably not crime people in the room, so just to benchmark your understanding here, most rich countries that you will visit for conferences and vacations have a murder rate per hundred thousand of about one just as a way to think about the y-axis scale in this graph.

One of the things that you can see in the data going back to 2019 is that there's been enormous volatility in homicides and mostly homicides. Most other crimes don't show anything like the same sort of swing since 2019. It's a little -- Other crimes are harder to measure than murder, but to the extent to which we can tell, it looks like murder is the thing that has changed the most over the pandemic period. We saw something like a thirty-four percent increase in murders over just two years, 2019 to 2021.

As a way to think about that, that's about seven thousand more murders per year over a two-year period. You can see when you look at the long-term time series, there have been really big ups and downs in murder rates over time. But the other thing that you can see when you look at this graph is most of those big changes happen over fairly extended periods of time.

So this 2019 to 2020, twenty-one period is about twice as big as the previous largest one or two-year delta that we've seen in homicide rates. So really unusually large change. And then 2021, the pandemic starts to ebb, and we see dramatic decrease-- declines in the murder rate in the US.

Oh, sorry, the other thing that I wanted to add just also by a little bit of context setting. So the reason that it's particularly important that murder is the crime that's showing so much volatility here and that is so off the charts compared to other countries, is murder is the crime that drives the social costs of crime in the United States.

In cities, it's something like seventy percent of all the social harms of crime come from murder, even though murders are a tiny share of all the crimes that happen. Murder is one of the key drivers of people out of cities. So if you think cities are the economic engines of the country, that's that's terrible.

And murder is a massively regressive public health problem. One of the main drivers of life expectancy disparities between Blacks and whites. And it's much worse than you would think just from looking at death rates, because most causes of death get older people. Homicide is disproportionately concentrated among young people, so when you look at things like years of potential life lost, homicide just rises to a top 10 years of potential life lost cause.

Okay. The other thing that's worth noticing or noting about the recent period is almost all of the volatility that we've been seeing in murder rates is coming in gun homicides. Nearly a 50% increase in gun homicides from 2019 to 2021 this is a graph that shows you percentage changes in homicide victimization rates to different demographic groups and geographic groups.

So the first column is 2019 to 2020, first year of the pandemic, then 2019 to '21, and then '21 to '24. This is the last year for which we've got vital statistics data on murders. And the first thing that you can see here is that almost every demographic group and geographic area is being affected the same way. Big increases during the pandemic period and then big decreases. Interestingly, that's true even outside of cities. I think when I first started to track this in the news accounts, I thought this, like many of our crime phenomenon, is mostly an urban feature, but we're seeing similar things outside of outside of cities.

And the other thing that is interesting about this is every group is affected, but the largest percentage changes are among the groups with the highest baseline murder rates. And so most of the volatility in homicide winds up being disproportionately concentrated among men, Black Americans, and young people.

So everybody affected, but very heavily channeled among among the pre-pandemic high risk groups. Okay. So then the question is, why? What's driving these these big changes? And you all read the same newspapers that I do, and you are at least as aware as I am that there is no shortage of explanation.

COVID being the most obvious explanation. There's a huge number of potential downstream mechanisms resulting from COVID. George Floyd happened just a couple months after the first emergency announcements of COVID. Lots of criminologists think that drug markets changed in important ways as a result of the pandemic.

Post-pandemic in 2021, we had a huge infusion of resources to state and local governments. Technology is changing very rapidly over this period. Every city in the country is looking at the big drops in murder in their city and saying, "Let me tell you about the really innovative thing that my city has done."

And the Trump administration points to stepped up federal enforce... So lots and lots of candidate explanations. And I think it's fair to say I'm I become sort of a professional reader of hypotheses about what's going on. And I think it's fair to say that there's no really coherent understanding of what is going on with these massive changes.

And so what I'm gonna try and do is I think that incoherence elimination is too high a bar to set. I'm gonna aim for incoherence reduction, and we'll see if I can persuade you that that this does that. So my hypothesis for why it's been so hard to figure out what's going on is, I think...

You know, I recently had a book come out about gun violence in America. I spent a huge amount of time for that book looking at survey data that asks Americans what they think drives gun violence. And the interesting thing about those surveys is you realize almost all Americans basically believe the Becker model of crime, the same way that almost all economists believe the Becker model of crime.

You have a mental model of this problem that people, before they do engage in any sort of crime, including pulling a trigger, are engaging in some sort of deliberate, more or less rational weighing of incentives, of pros and cons, and we apply that to crime. We just export that to, to gun violence as well.

And what I wanna argue is that way of thinking happens to not fit very well with the problem of gun violence specifically. I don't wanna say that way of thinking is wrong, but it just happens to not fit most of what the gun violence problem in America is. Okay. So, here's a graph that shows you changes.

2021 was a very weird year in the crime data, so I'm just gonna omit changes over that period for present purposes. I'm gonna show you changes during the pandemic and post-pandemic in some of the key mechanisms that people have been looking at motivated by this Becker way of thinking. All right.

And let me start off with changes in economic conditions. So lots of people I talk to, they tell me some version of, "This is very straightforward. Unemployment spiked during the pandemic, and that's the reason that homicide rates increased." Notice that poverty didn't increase nearly as much because of the big infusion of federal dollars, but the unemployment rate surged.

And then they say, other people will say some version of the criminal justice system completely collapsed through some combination of COVID and/or the response to George Floyd. Okay. So here's the first interesting thing about the microdata on the relationship between economic conditions and gun violence specifically, which is there is almost no systematic relationship between things like the unemployment rate and the murder rate.

There is a relationship between the unemployment rate and property crime. There's not a relationship between the unemployment rate and the homicide rate. Another way to see that the spike in unemployment rates can't be driving the surge in homicides is if this was an economic condition story, you would have expected property crime to surge during the pandemic as well.

And again, measurement is a little bit challenging, but if anything, we think that property crimes declined over the pandemic, right? So it doesn't seem like it's economic conditions, I would argue. Now, if you look at the 2019 to 2020 period, you will see it's the adult arrest delta that's most important. Ninety percent of the shooters are eighteen and over in the US. Felipe has a paper that I think if you took his results and extrapolated those out of sample a little bit, you would think that the largest increase in crime that you would see from a twenty-three percent reduction in adult arrests would be about a eight-ish percent increase.

So maybe that could explain part of the story. The reduction in prison inmates is way too small to explain very much of the increase in homicides. But here's the puzzling thing about a kind of deterrence or incapacitation story. Homicide rates have been plummeting all over the United States since 2021, and yet we've seen almost no increase in in arrests and incarceration.

Okay, so everything that I've told you so far basically echoes a point that Glaser, Sacerdote, and Jose Scheinkman made in the QJE thirty years ago, which is there's just way too much

variation in crime to explain the variation in the benefits and costs of crime. Okay. So what do I think is maybe going on with the Becker world?

I think that we have maybe implicitly or explicitly the wrong mental model of what gun violence in America is. We imagine it's like in *The Wire*, where it's like Omar going out to do a robbery, right? And then he happens to shoot someone in furtherance of the robbery. Or it's like Snoop Pearson and Chris Partlow going out to do a hit on Avon Barksdale's gang. Right? We imagine as part of some war between organized hierarchical gangs over drug-selling turf. Criminologists have a term for violence that is in furtherance of some other goal. They call it instrumental violence. There is instrumental violence. So there's some measurement challenges in breaking up homicides into instrumental, and I'll explain what non-instrumental homicides are in a second.

There are instrumental, so that definitely does happen. But you can see in this graph, that's a fairly modest share of all homicides over time, and as best we can tell in the data, it was not *Wire*-style homicides that is the thing that surged during the pandemic. Okay. So what are these homicides?

Most of the homicides in America are what criminologists call expressive homicides. Somebody is pissed off, and the violence is not to further some other goal, the violence is the whole point. The whole point of the thing is to hurt the other person, right? These are arguments, they're domestic assaults, they're drunken brawls. That's what most-- They're arguments settled with guns, is the way to think about this. Okay. And that's what most murders are, and that's the thing that drove the big increase and most of the decrease in homicides in the post-pandemic period.

So what's going on? Most of you have probably read Danny Kahneman's *Thinking Fast and Slow*. You'll be familiar with the idea that our minds don't work the way we think. The little voice in our head, System Two rational thinking. This is sort of what the Becker model implicitly assumes is driving decisions to engage in crime. And I wanna argue that a better way to think about what people are doing in these expressive instances of violence, you are pissed off and you just really wanna hurt the other person.

I wanna argue that a lot of these arguments get started and escalate because System One is leading you to misconstrue a situation, to overreact to a situation, and we can talk more about that during the Q&A. Okay. Why do I think there's something to that? We've done some randomized control trials in Chicago of interventions where the only thing that they do is teach people to be a little less System One automatic in high-stake settings, and you don't see small changes in violence crimes arrests.

You see huge reductions, like fifteen hours of this sort of programming cuts your violent crime arrest rate in half, reduces weapons arrests by thirty-three percent. So if gun violence is guns plus violence, you're dramatically pushing down both margins with a relatively light touch sort of intervention.

Okay. So with that as an alternative hypothesis for what's going on with American gun violence, how do we map then back to thinking about the macro trends? Well, my friend Sendhil Mullainathan and Eldar Shafir had a paper that came out in 2013 called *Scarcity*. Some of you might be familiar with this. The idea that anything that causes mental distress and generates a sort of cognitive bandwidth tax leads people to be more automatic.

And as I show in the paper, it's very hard to look at all the data that we have from the pandemic and not think this was like a hundred-year flood for cognitive bandwidth tax on people. And I would venture to guess that the huge increase in drug and alcohol use over the pandemic probably didn't help. If you think of gun violence as driven by bad decision-making in high-stakes moments, being drunk or high very rarely improves people's decision-making. So another reason that I think this is a big part of the story, so you can see it's expressive homicides that are driving it.

The one other serious crime that really increases in the pandemic is aggravated assaults. That's basically fights that escalate into violence. You might worry that the crime data are quite crappy in general, but especially during the pandemic. And so I was trying to think, is there a near-perfect measurement environment where we find out about almost all the misbehavior that happens? And my hypothesis was, let's look at the data that the FAA collects on what happens to airplanes, 'cause I'm looking at all of these social media clips of people beating the crap out of each other on planes thinking, "I don't remember this used to being a thing." You can see there's something like a nine X increase in what the FAA calls disruptive passenger events on planes.

Part of that is a little, maybe a little bit of an artifact. In 2021, they implemented a mask mandate on planes. But even if you subtract that out on the right here, you can see that there's like a doubling of people losing their minds on planes over this period. And I think that we're finding out about most of those in this case.

Okay. Let me show you a couple other interesting sort of co-occurring trends with murder that also helps paint this sort of story. This is a graph of drug overdose death rates and homicides. It's kind of interesting that these track each other so closely during the pandemic period. This is homicide versus motor vehicle traffic death rates. Kind of interesting that they track each other so closely during the pandemic. This is homicide versus suicides. This fits less well for whites, Hispanics, and Asians, but it fits reasonably well for Blacks, which is the group that is most affected by homicide. That's kind of an interesting co-occurrence.

I think when I look at those four causes of death, they all look to me like deaths of decision-making, so it makes me wonder whether these things are all being affected by the same underlying kind of bandwidth tax.

And then I'll just close with I think the other final big change that happened in the background here that I think, you know, this bandwidth tax is something that you'd expect to see in every country. North America really is a bit of an outlier during the pandemic in our surge in homicides. I think one candidate explanation for what happened there is this is data on a proxy for gun carrying in the city of Chicago. This is the fraction of police stops that result in the confiscation of a gun. Okay? And you can see that from 2019 to 2021, it increases by over a hundred percent. I think this change in gun carrying has gotten a lot less attention because there's no national data on this. You have to cobble this together from a not super representative collection of local places.

But the local places where we've been able to get the data, you see similarly huge increases in gun carrying. It's a little bit hard to say exactly what's going on there. There're some puzzles with these candidate explanations. There's a co-occurring big increase in handgun sales that then drops after the pandemic. There's a big plummeting in police stops during the pandemic that then rebounds. Maybe they play a role. I'm sure we'll get into that during the discussion.

Okay, so here's what I think is the sort of the high level, maybe the two last high-level takeaways. So we've been thinking about the US gun violence problem as being all driven by kind of deliberate benefit cost calculation. It is arguments with guns that is our problem. That is the thing that has been changing so much over the pandemic. More arguments than less arguments, more guns present in argument than less guns present in argument. I think this way of thinking about the problem helps us understand, maybe helps us understand better what happened during the tail end of this graph, but maybe also helps us understand why we have made such little long-term progress on the homicide problem in the United States.

Life expectancy has almost doubled since 1900, and yet the murder rate today is almost exactly like it is, like it was in 1900. And one hypothesis is maybe we haven't made more progress because we've just been thinking about the problem in the wrong way. Thanks very much.

STEINSSON: And our first discussant is Marcella Alsan

ALSAN: Great. Thank you very much. It's an honor to be here today. And I think it's a terrific topic for the Brookings to think about. It's an enduring puzzle why there's variation in crime rates. It's particularly perplexing of late. The New York Times highlighted this in July 2025, and the president of the Council on Criminal Justice says it feels like what's happened over the last five years has upended some long-held beliefs about crime.

And I think that's the lens that Jens takes to this paper. He thinks about, you know, we really, as economists, need to rethink our model of crime. He establishes some first-order facts that are incredibly powerful, that this whiplash rate in crimes was not just homicides, it was also other forms of violent crime.

It was not limited to a particular subgroup, and the mayors really shouldn't be taking credit because it was also not limited to a particular US city. What the data don't seem to support, there's lack of compelling evidence for theories favored by the left that it was poverty or unemployment, or by the right that it was family structure or law and order.

And the data then lead us to this mental health stress that's mapped into a behavioral model, plus firearm prevalence. Since policy did allow firearm gun store owners to remain open as essential businesses, there was a different composition, new users coming in, and there was, as he showed, more carrying.

So at a high level, this is an incredibly impressive and inventive array of data. It's very hard because crime is reported and there's reporting challenges during this time. We don't track firearms very well, so that makes it challenging. And Jens has done an incredible persuasive and entertaining job of making the case that economics needs to think about crime differently.

And he, I think, aptly applies the system one versus system two thinking. It made me curious about what was happening in other countries and thinking about what might be the same, what might be different, and how that could help us further refine our models of behavior. And if we're gonna call it you know, a bandwidth tax, let's treat it as a tax.

Let's try and understand the incidence and the economic burden a bit better. And then finally, to this point that I think we come back to again and again, it's that long run trend that Jens pointed to. Why the lethality? It's clearly the answer is not a mystery. It's the firearm. But can we understand better the mental model of how people choose to own or not to own a lethal firearm?

Okay, so here's what we have for data from other countries. It's not as impressive as what Jens has marshaled, but it's from a Nature Behavior article looking at dozens of cities around the country, and those red lines are times when the stay-at-home orders were put in place. And what you typically see are these drops in burglary. Theft goes down and then rebounds. And when you subject this to regression model or a meta-regression, these daily police data from these cities point to COVID policies are associated with declines in, in burglary and about forty-six to forty-seven percent declines in robbery and theft.

Interestingly, when you look at homicide in this series, it doesn't go up. It doesn't really go down that much. It's kind of more or less flat. This makes me think about the differences between property crime and person crime, or between, for this audience, the K's and the L's. Property crime, clearly the theft or destruction of physical goods. Oftentimes, you're stealing from a stranger, and it requires accessible targets and opportunities for gains, such that commercial activity and transportation nodes will make those opportunities more ample.

Interpersonal crime, according to the WHO, is direct physical or psychological harm. Scholars, including Jens, have shown that homicides, in particular, tend to be highly concentrated in certain hotspots, and sociologists have shown that forty-one percent of homicides occur in less than four percent of a community's population.

So what if we just take Becker seriously and actually just add some COVID policies? And I'm gonna do this in a very toy way. We know the model well. There's a benefit to the crime, maybe a private psychic cost, an expected punishment. And what if we just added in availability? Well, it's likely the case that these policies did not affect those availabilities the same way. In fact, mechanically, they didn't. Stay-at-home policies are going to lead fewer people to be in commercial areas, more people at home, so fewer opportunities for burglary.

It's unclear to me, though, how the greater availability of being at home or not taking public transportation and being in your community would actually affect interpersonal crime. Would it rise? Would it lower? I think we need something else, and I think that's actually where the bandwidth taxation could come in. We could simply call it you lower your disinhibition of hurting someone else. So with that additional contact plus that lower threshold could in fact motivate more interpersonal crime.

And some of the ways that we see that this you know, bandwidth tax was kind of broadly shared is that very clever unruly passenger incident graphic that that Jens gave, reported to the FAA. But Brookings has also collected some of this data. That's the data on the right that actually looks at disputes between conflicts between school boards and their communities.

And you can see that these conflicts during the pandemic were w-- across the political spectrum. They were in blue districts, and they were in red districts. So it seems like at least on a statutory basis, we all kind of were subject to this tax. But of course, statutory incidence is not economic incidence.

And the-- as as Jens pointed out, those who had higher levels of violence coming into the pandemic experienced even greater increases. He mentioned already that really this mortality, though it's well measured, is really just the tip of the iceberg. Non-fatal injuries are probably two or three times as large.

And a paper recently published in the Annals of Internal Medicine showed that those physical harms for those people who don't die at the barrel of a gun; they experience forty percent increase in physical pain, fifty percent increase in psychiatric disorders, eighty-five percent increase in substance use disorders, and twenty-five hundred dollars additional medical spending per month in the year following a non-fatal shooting.

So the paper is fantastic, and it focuses on homicide because it's well measured, even though it's, like, one percent of crime and has a social cost. But there's also many other forms of interpersonal violence, and I would suggest that they're all pretty regressive. Femicide, Jens points out, increased by twenty percent, and that definitely skews towards the more impoverished women those who are minoritized, and they're also more caught in these abusive relationships, and we can think about models of bargaining and outside options.

Violence against children, again, was not necessarily evenly distributed. It appears the best estimates are that places that experienced the biggest income losses had the highest odds of very severe physical assaults towards children. I think the question is, you know, how costly was this crime wave? I think Jens rightly points out homicide is socially costly, so we should focus it on it.

But in this time, businesses are shut down, streets were empty, people were already moving out of urban areas because they feared the virus. So how much economic damage could interpersonal violence pose during this time? I think the recent research shows that intimate partner violence, IPV victims, do suffer greatly at the hands of this violence.

They have lower employment, a twelve percent drop in earnings. Child maltreatment is estimated to carry a lifetime cost of roughly almost a million dollars per non-fatal victim. And new work by Emily Nix at USC and colleagues causally identifies the intergenerational transmission of intimate partner violence from father to son.

So even if this was all private, not public, even if it was very short-lived, I think interpersonal violence spurred by COVID or COVID policies could leave these lasting scars and increase inequality. A recent book has tried to put more numbers on this as a global phenomenon. It was out in May 2026. It's by James Fearon, who's a political scientist at Stanford, and Anki Hofler.

And they make the point that interpersonal violence is worse than war. So if you look at the top table, that's collective violence, that's your usual armed conflict, terrorism, and the like. And then the second category is this interpersonal violence, homicide, violence against women, and violence against children.

Their bottom line takeaway is that this is because it's so prevalent that it actually is a cost of thirty trillion dollars on average around the globe. Now, that's a high number, but I just want to point out that they don't have, for the macroeconomists in the room, any numbers about

what actual interpersonal violence does for the economic growth because those numbers, according to them don't exist.

Okay. So then the last point I wanted to try and talk about related to some of my own recent research is how does this ki- conflict turn deadly? So you're bandwidth taxed, you're starting to argue more. How does it go from, you know, an argument with violence to a deadly encounter? And I think this graph shows that the key is the gun. The question is, you know, what is the mental model that Americans use when they're trying to understand whether or not to purchase a gun?

So with Josh Kwartstein and Stephanie Stantcheva, we've showed pictures like this and asked people, you know, what comes to mind if they would own this gun or if they already own a gun, how does it make them feel? You won't be surprised to note that gun owners feel safe, protected, secure with a gun. People who don't own guns feel scared and nervous. But we identified a substantial fraction of those non-owners who actually would prefer to own a gun. They haven't bought one yet, and they would feel more safe with it. So we looked at a, a whole range of emotions. That dotted line separates positive valence emotions from negative valence emotions, which are lower down.

The red dots are lethal firearm owners, and you can see for them, owning a gun makes them feel safe, confident, patriotic, in control, and respected. For those people who don't yet own a gun but want to, you see positive valence coming out again, but you also see they feel nervous and scared and maybe a little unsafe.

For those who don't own a gun and don't want to own a gun, the situation flips, where they would feel more unsafe and nervous and irresponsible should they actually personally own a gun. Now, you might ask, how does this relate to reality? It doesn't really relate quite that well. So there is a slope if you look at the incidence rate of violent crime on the X-axis and how you feel safely in your daily life on the Y-axis. It does slope down, so the more crime, the less safe you feel. But you'll notice that the red and the blue lines basically sit on top of each other. Those are people that have guns and want guns, and people that don't have guns and don't want one. So basically, you're in the same community, and you feel as safe if you have a gun and want one as if you don't have a gun and don't want one.

What's the green line? Those are the people that feel much less safe in those same communities because they don't have a gun yet. So how could we bring lethal firearms into this framework? Certainly, it could affect the outside options. That's what Acemoglu has done in his economics coercion, just letting guns kind of increase your need to participate. But it could also lower the threshold for conflict. So if we think there's a bandwidth tax, maybe there's a security subsidy. You feel more emboldened, more secure in approaching people if you have a lethal firearm on your person. And indeed, this this points to a much older literature. It's actually coming out of the 1960s.

It was called the weapons effect. It's highly controversial, and it would be very difficult to replicate in today's IRB. But psychological studies with college students suggesting that if you had a firearm on the desk as opposed to a badminton, that's what they used, you were more likely to shock your classmate.

And there were other studies that suggested that just the mere presence of a firearm could increase aggressive and hostile behavior. So emotions might not only be important for the

decision to own, to carry, and to shoot a lethal firearm, in turn, it could actually affect your reasoning and your emotional state itself.

In conclusion, this is a creative and valuable analysis of what causes violent crime and how to help remedy it. It's Becker meets a bandwidth tax, the incidence of which is borne to those who are least able to bear it. I think that's what's missing is that there's still this lack of curiosity about why some people are less able to bear the bandwidth and what puts people at risk to begin with.

In other words, I think there's still a public policy role to deal with the underlying structural violence that makes people at risk to begin with. And then it's not really a mystery. How does interpersonal conflict turn deadly in the US? It's firearms. And then in the-- and it wasn't really to be taken seriously that arguments and firearms are additively separable.

What I would submit to you is that firearms are bought or not for emotional reasons, and it might actually affect which system is used when we're doing information processing around a threat response. Thank you.

STEINSSON: And our second discussant is Felipe Goncalves

GONCALVES: Okay, great. Thanks to the organizers for including me on the program, and thanks to Jens for writing this great paper. So you can think of this, this topic and this paper as having broadly a, a descriptive component. We have this particular historic episode where crime increased substantially during COVID, and we want to understand what were the causes of that and also what were the causes of the decline afterwards.

But there's also a big normative component here. We're trying to understand what are the policy takeaways going forward? How do we change our toolkit for dealing with crime going forward? So my discussion is really gonna be think-- you can delimit it broadly into these two components. And so I wanna start with these four facts that are important for me in, in how I think about crime and public safety but I also think are important for thinking about what happened during the pandemic to crime.

So the first one, which Jens touched on a bit, is this fact that aggregate crime often moves in ways that are hard to explain with economic fundamentals. If you try to run a regression of cross-sectionally crime across locations on economic fundamentals, the R squared there is gonna be quite low. Also the case longitudinally, variation in economic fundamentals doesn't really explain a lot of the variation in crime.

If you look at that figure over time that Jens showed of the homicide rate, two particular periods that might have surprised you if you had this economic theory of crime, is that in the late 1960s when unemployment was really low, the crime rate was going up by a lot. In the Great Recession, when the unemployment rate was spiking, crime was actually continuing to fall.

We have this big decline in crime in the 1990s, and that just persisted through the late 2000s. Now, while this is the case at a macro level that we have a hard time getting a good R squared on variation in crime, we also have a huge micro literature that shows that these economic fundamentals do actually matter at the individual level for explaining offending.

So getting a-- We do have estimates of a positive causal effect of employment of human capital on people's offending behavior. The second fact here that I think is important for explaining the first fact is that offending in many cases can be strategic, and I'm using strategic here in a game-theoretic sense, which is that the incentives for offending depend on other people's offending behavior.

So two Columbia economists, Brendan O'Flaherty and Rajiv Sethi, have a large research agenda pushing forward this idea of what are the implications of the fact that crime has strategic motives to it. So to put it very succinctly, people sometimes kill simply to avoid being killed. You're in interaction with somebody, you don't know whether or not they have a gun, you don't know what they're capable of doing. You might engage in a preemptive way in self-defense.

Another form of this kind of strategic interaction that can matter in offending is something that sociologists have talked about. This is Elijah Anderson, who has argued that in dangerous neighborhoods where there's not a lot of trust in institutions, people rely a lot on their personal reputations. And there aggressive behavior may be a way of creating a reputation that people shouldn't mess with you. So he says, "A credible reputation for payback or vengeance is strongly believed to deter future assaults." So why is this important? Well, if you have social interactions that can generate multiple equilibria, you can have two places where the fundamentals are identical.

We have radically different cultures. You have radically different equilibria in how people are behaving. And temporary shocks can have these big persistent effects. The third observation is a measurement observation, which is that by its very nature, people who are committing crimes would rather that their behavior not show up in administrative data.

So all of the administrative data we have for measuring offending is gonna be a selected sample. We have to take that very seriously. So going from crime to stuff we see in 911 calls, victims and witnesses have their own incentives of whether or not to contact the police. And then from there, the police have their own incentives of whether or not to write down a crime report, which is what we eventually see as crime statistics.

So when we wanna look at these historical periods where crime is changing, our measures of crime are changing. And so we have to disentangle whether it's true changes in offending versus any changes in the selection of offenses entering into our data. And finally, when we talk about crime waves, where we have lots of different types of crime, and each one is its own distinct phenomena.

In particular in COVID, we have different patterns going on with domestic violence, with property crime or more instrumental offenses, and finally with homicide and more expressive forms of violence. So the meta lesson with all of this is that for behavioral reasons and for measurement reasons, it's very difficult to understand crime at a macro level.

So we want to understand particular instances of why did crime go up in this period? Why did it go down in this period? It's gonna be particularly difficult for these reasons, and that's all context to say that it's really Jens had a big task ahead of him to try to explain this crime spike in 2020, and I think his paper does a very admirable job of putting forward one hypothesis for why it increased.

And I, to put it succinctly, I think the argument here is that first and foremost, generalized stress during COVID increased impulsive and antisocial behavior. I think the key argument that he shows that I thought was most surprising, at least for me personally, is that it wasn't just what we typically think of as crime that was increasing. It was also these other forms of antisocial behavior, misbehavior on airlines, more car accidents, general kinds of lacks of decision-making ability with some contributing mechanism here being an increase in gun carrying, where here the measurement issue is particularly stark.

How do we figure out how much gun carrying is happening? It's police searching people for guns, and police dramatically decreased the number of searches for guns in this time period. And the argument here is that there was a much smaller role for the George Floyd murder and the ensuing protests. So this is broadly like the descriptive argument in the paper, but there's a normative implication here, which is that interventions that improve decision-making under stress, for example, these CBT types of interventions, may be especially promising tools for reducing violence.

And Jens and his co-authors have written a whole bunch of papers showing individual randomized control trial evidence that if you take a group of people who are at risk of committing crime, you give some of them a CBT intervention, they're gonna be much less likely to commit crime in the future.

So I have two broad comments that I wanna make on, on these arguments. The first one is gonna be more of a normative argument. The second one is gonna be more a descriptive question about what happened in 2020. So the first one is going back to this point that crime is an equilibrium outcome. So we can have these RCTs where we say, "Okay, we took this group, we gave them an intervention. They're now less prone to committing crime." But now you put them out in the world, most likely they're living in a high crime neighborhood where the high crime is this equilibrium outcome. They're entering interactions where the other person is gonna be more likely to commit an offense than if they interact with somebody let's say in a room like this.

And it's not clear how long that intervention is gonna persist if they-- okay, they went and got a CBT intervention. They're very calm now, but now they go back to their neighborhood and they remember the types of interactions they're having. And so we really need to think about this question of how concentrated or how diffused do we make these interventions?

And I think there would be a lot of scope here for thinking about these interventions in conjunction with this other literature of what's called focused deterrence. So there's this other type of intervention that has been tried in many cities where you take the most serious offenders in the city, you put them in a room together with a bunch of law enforcement officers, and you coordinate across a bunch of agencies to develop the best cases possible against these offenders.

And you show them the case and they say, "Okay, if you leave this room and you commit another offense we're gonna send you to prison for the next thirty years. So please don't offend. The other rival gang that is the reason you're preemptively committing crime, they're on the other side of this room. We're talking to them as well. So everybody stop offending and also hear all these sorts of services that you should take advantage of." So there is a question here of how do you target these interventions? How concentrated are they versus how diffuse they are?

The second question here that I have is this descriptive question. So Jens makes this argument in the paper that the George Floyd shock is perhaps not as important as you might have thought. When I first saw the title of his paper, my, my initial read was, well, I have my own theory of why crime went up. I think it was because of the George Floyd murder, ensuing protests and riots. The, the main argument in the paper is that, well, if you look cross-sectionally at variation across places and the magnitude of protests, it doesn't really track with the places that we saw the biggest homicide increases. The issue with differentiating between the George Floyd murder in May of 2020 and the start of the pandemic, obviously, is that these are happening very close to each other.

Most of the crime data that we have is quite aggregated, and so it's really hard to differentiate between the two of these. So I'm gonna show a little bit of evidence here from microdata from a few cities that allow us to actually differentiate between these two, and I think point to the George Floyd murder actually having a quite important role to play.

So this is from a handful of cities that make their microdata on crime and arrests publicly available. On the left-hand side here, I'm just showing you a time series of 2018 and 2019 of arrests per capita. On the right-hand side, it's homicides per capita. The red line is 2020. You see the first gray line is the COVID emergency declaration. As you would expect, you see this big drop in total enforcement concentrated in low-level enforcement. It's kinda gradually increasing. And then May 25th of 2020, George Floyd is murdered, and then you get a big drop again.

If you look at homicides, the increase and the persistent increase really seems to coincide with the second event. However, if you look at homicide clearance rates, many of these cities also allow you to link these two datasets and say, "Well, what happened to the clearance rate for homicides?" That doesn't seem to change in this period.

So I do think I agree with Jens' assessment that it's really hard to rationalize this big increase in homicide with the change in the fundamental incentives of these offenders. The probability of being apprehended for a homicide doesn't really seem to be changing in this period. However, we've seen this kind of pattern before in a pre-COVID period.

This obviously was not the first time in the last fifteen years that we've all been talking about viral instances of police shootings. Here's another case from Chicago in November of 2015. So this was a murder of Laquan McDonald. It actually happened in 2014. There was a long legal dispute of getting the body camera footage publicly available. That came out in November 2015, and this is what happened to the homicide rate in Chicago. You can look at a whole bunch of other instances of similar viral police shootings in the 2010s.

So Roland Fryer and his co-author Tanaya Devi have a paper looking at the effect of these different viral incidents. Their focus in that paper is on the interaction between these incidents and federal oversight of police departments. For our purposes here, I'm just gonna focus on the cases that don't have federal oversight. And what you see is this simultaneous decrease in arrests per capita by the police, and also a persistent increase in homicides per capita. So if you look at these arrests per capita, most of this decline is in low-level enforcement. I think you can still continue to argue that the fundamental incentives of potential murderers has not really changed. A year out when homicides are still high, probably the scandal is no longer top of mind amongst offenders, but you see this temporary shock has led to a persistent increase in offending.

So what does this look like to me is perhaps it's not a Becker model of crime that's explaining this, but I would say that it's possibly another behavioral story, which is that this looks like a legitimacy crisis. There's a big literature in the legal world trying to understand not just why do people offend, but the flip side, why do people, for the most part, seem to behave laws that are usually not enforced?

Usually we don't jaywalk even though we know the probability of being caught for that and being sanctioned is not that high. Yes. Okay. So perhaps it depends on the norms, the equilibrium that you're in. I'll confess, yes, it depends on my environment whether or not I jaywalk as well. But so Tom Tyler, this legal scholar, his argument is basically our propensity to offend depends on the legitimacy of law enforcement institutions.

And these were periods where we had these crises of legitimacy for these institutions. 2020 was a period where we also had crises in a lot of other institutions. So people were mad at airlines, people were mad at schools mad at our healthcare institutions. So it's very possible that these other depths of decision-making, these other places where we are seeing spikes in misbehavior, are these co-occurring crises of legitimacy in these other institutions.

And so I think that's important descriptively, but it also lends itself to this question of, well, what does that mean for policy? How do we actually improve legitimacy of these institutions if it's really important for offending? So I'll conclude by saying I, I fully agree that we need to expand the toolkit that we have for fighting crime.

These CBT interventions are a really important expansion in the toolkit for fighting crime. I-- going back to the, the classic Becker paper What does this whole discussion imply for that paper? I agree that descriptively it really leaves much to be desired if we wanna explain these big macro fluctuations in crime.

It's not clear that the carrots and sticks story is going to help us very much. But I-- there's still substantial causal evidence that these are useful policy tools so that we shouldn't throw this-- throw out these policy tools because descriptively they're not helping us explain historic events. It's still true that if you double the police force size, all of the evidence indicates that crime is gonna go down.

And finally, I would say there's still a lot to be done for understanding the role of legitimacy in fighting crime and what kind of policy tools do we have there for helping fight crime. All right. Thank you.

STEINSSON: Okay. So, let's open it up for questions. Luis Garicano

GARCIANO: After those outstanding comments, it's gonna be hard to make good comments for all of us, I guess. But so, a couple of things. So first, a clarification. So when-- There was a phrase that I took note of that Jens, that you said, "Look, there is no evidence that violence correlated with poverty." I mean, obviously, that's not true on the cross-section, I would imagine.

And if it doesn't explain the longitudinal evidence, it's not clear what to take from that. Like, macro goes up, GDP goes up, GDP goes down, literacy doesn't change. Oh, well, so we cannot explain literacy with income nor income with literacy. They are uncorrelated on the longitudinal. Well, that's, that, that's just not right. I mean, we know that literacy is going to be

very correlated with income on the cross-section and on any experimental or RCT or any treatment. So, is that just the scope of the statement that just over longer terms, we don't explain crime waves with income or is there something more than that? Because we're looking at something different than those trends.

And on the Beccarian interpretation, I like very much this, this story indeed about the equilibrium effect. So two, two colleagues of yours that I'm sure you've discussed this just to make two examples clear.

So one is that you didn't have the evidence on the going up and down of arrests and kind of police kind of activeness. Kenny Sprenger says this drive and wave story from LA. So you have the Rampart scandal, and you have the LAPD stopping getting under a big scrutiny, and what you see is that the, the police officers talked about drive and wave, which is basically you see something and you look somewhere else and you continue driving, and you don't do anything about it.

That's very apparently true in COVID. We do see drops in arrests, and the equilibrium behavior might be important. The other person I'm thinking is Chris Bloodman and his study of gangs that you-- I'm sure you know way better than me. And he talks about bluffing and strategic behavior and deterrence. And I mean, the gang guys are perfectly aware of the need to preserve deterrence by shooting somebody when somebody's shot, et cetera. So again it's hard to argue beyond what happened with this moment in COVID, that crime behavior is not explained by Beccarian things on the left, income, and on the right, deterrence and on the basis of what we saw.

And maybe I'm just overstating what all these other things suggest.

STEINSSON: Justin Wolfers

WOLFERS: So if I understand the paper, it's that homicide rose a lot in 2021 and 2022, and the conclusion appears to be that people got a bit weird in 2021 and 2022. And as someone who was alive then, that seems obviously true.

LUDWIG: Weren't you in Australia?

WOLFERS: That's why I was alive and then because you're a serious social scientist, you gave people who got weird a serious name, a bandwidth tax, and because you're an economist, you called it a tax. But I'm not sure what it is still.

Because if I think about all the ways in which things got weird during that period, I personally had moments of fear. I had moments of boredom. I had moments of feeling stuck at home. And given my politics, I was outraged at the jackbooted thuggish government control over my life. And all of those things could be what you mean by being weird, and I'm not sure which one of those things is a bandwidth tax, so I'm not sure how to use this idea of a bandwidth tax next time.

Part of the contribution of the paper then I think is to falsify other theories of the case. Now obviously some of them are silly, right? Like changes in family structure. Family structure didn't change over a two-year period. That's obvious. I think what's harder is the economic

data. So there's a question, what was the - what's the relevant unemployment rate to think about for what happened to unemployment in 2020? Should you think about the minimum in the year, which was about 5%? Should you think about the annual average, which was 8%? Sorry, the annual average, which was 8%. Should you think about the maximum monthly number that was 15%, or the maximum daily number that was probably 25%? And I think if you put any of those numbers in next to any coefficient, given that those numbers are huge, we had arguably a quintupling of unemployment depending on how you thought about it.

And so if there's any coefficient on economic conditions, it could probably do a lot of work. I always like these papers. Case studies are great 'cause when you have one hypothesis for one episode in one country, you tend to get an R squared of one. And so I just wanna sort of push beyond that. What would our other episodes be? So I thought, when did people otherwise suffer a bandwidth tax? And I'm a terrible historian, but I reckon World War II was probably pretty bad. And during World War II, homicide rates were very low and falling. Or you could think about other countries. The discussants obviously mentioned that, but that seems to me to be the obvious way of moving beyond this.

And then finally, I was a little confused about the role that guns play. One view is that guns are an additive factor. So people went a little bit crazy, so they started carrying more guns, and that's what was going on. The other is it's multiplicative. People went a bit crazy and there's guns hanging around, and that's what translated into homicide.

If that's the case, there's plenty of useful variation in gun ownership rates. My own country of Australia, there's essentially no guns in the cities, but farmers have guns. And if farmers went a little bit crazy and it's meant to be an interaction effect, then you might have expected to see a rise in homicide in Australia's rural areas. I just give that as one of many examples, but I think the world's gonna throw up lots of variation for the sorts of theories you're thinking about.

STEINSSON: Bob Gordon?

GORDON: These are great paper. This is great paper, great discussions. And I'm so glad that we've now heard two or three times about Chicago. Because I think in this macro group there's a little too much emphasis on time series and why it went up during COVID and came back down. We have enormous variation in the US across cities of murder rates.

And just to give you an example we heard about this when Trump sent out the National Guard to take over Washington. Murder rates, that is homicides per 100,000 population to give you four cities. Washington, before Trump, was 25, Chicago was 15, LA was five, and New York was three. It really bothers people in Chicago a lot that Chicago is 15 and New York is three.

So why is the difference? Well, one easy difference that is often pointed to is that Illinois is surrounded by red states that have very easy gun legislation, gun laws namely Missouri, Indiana, and Kentucky. And so guns flow into Chicago in a way that they don't flow in on the East Coast or within California. Another hypothesis is that Chicago's police have historically had very poor relations with the areas that commit the the highest crimes. And a sort of obverse of that is the parallel in New York where Bratton came in the early 90s with the broken window theory and did very tough street control. And there was this enormous

decline in homicides in New York from around 2,000 to 300 a year. So there's the police and how they interact with the community hypothesis.

And then you have what I think is, a particularly Chicago, maybe other Rust Belt city phenomenon, and that is a particularly violent and stark enforcement of segregation before maybe 30 years ago. I mean, literally around the University of Chicago and Hyde Park, just south of there is an area called South Shore. When the Blacks started moving in there, the whites were all gone within five years. I mean, there was such an intense desire by white people not to live around Black people, which in turn interacted with the violence, which was in the primarily in the Black areas.

Now, Chicago has very high-quality crime statistics, in part because one of the top universities in the country, the University of Chicago, has long had a crime lab and top sociologists who've studied crime. And the Chicago Tribune is full of editorial op-ed pieces by top-notch national experts on crime. And we hear a lot about the anti-violence groups that were brought up in, in the paper today. And I just wanted to mention how important that is. Ex-entrepreneurs, social entrepreneurs somehow get together ex-prisoners, ex-cons who can communicate with those impulsive people who, as well described in the paper, are retaliating against perceived enemies.

And they calm them down. They talk to them. They get them to be rational about the consequences of their actions. And while the, the paper mentioned that there was a decline of 45% in, in Chicago in homicides at least in some part because of these groups, that does not point to the really dramatic effects.

These groups do not cover the whole city. They go into little areas that are maybe one-twentieth of the population of the city, and within those areas, they sometimes cut homicides by 80%. It's just enormously effective, and it's such a good use of public money. And finally, a combination of public and private philanthropy has given these groups adequate funding on the order of, like, \$100 million or something like that which has made a big difference.

So I'd like to see more discussion of across city differences. And maybe because the variation, I didn't even mention some of the cities that are way above Washington like St. Louis and Memphis and so on. Why are there these big differences across section, and do they give us insight on the macro?

STEINSSON: Elaine Buckberg?

BUCKBERG: Okay, great. I thought that was fascinating. Thank you. And I have a few questions for you to think about as you go forward. You may have some answers, and I may hit on some of the themes that have been raised previously

So first, something you pointed out but didn't explain was why did the share of police stops involving a gun go up? Secondly, that left me wondering, does it vary across states that have concealed carry laws, open carry laws, or neither, or possibly any estimates of the amount of illegal gun ownership in those states?

I realize we focused a lot on cities, but generally those policies are at a state level. Three, the other thing that happened during COVID that we haven't discussed is sort of the loss of

community. And I don't just mean you didn't see your classmates or go to church, but this loss of everyday interactions that may have affected how people dealt with stuff.

Is there some way to think about that? And last, I was fascinated by the statistics you showed from the Becoming a Man program, yet those were very old experiments you were pointing to. So have there been efforts to really scale this? Thank you.

STEINSSON: Rick Mishkin

MISHKIN: Yeah. So, one issue that wasn't mentioned is gender. So I know from a cross-section viewpoint, this is very important. But for example, the increase in gun holding was there any issue in terms of differentials in terms of women getting guns versus, versus men getting guns? You know, I always remember this wonderful paper many years ago, which was in the Wild West.

There were all these murders and there were really no gun laws. And yet if you had a, a certain percentage of women, which meant that there were families they had the same crime rates or murder rates as they did in the East Coast. So, the gender issue could be something. Maybe it's not because there was no change, but could you comment on whether gender could have been or some interaction may have been important in this context?

STEINSSON: So let me ask a question also. So, so clearly guns are central to the argument. And so as a policy matter, gun policy seems to be central to any solution to this. Now, one of the things you talk about in the paper is the massive surge in gun purchases in 2020. And separately the increase in gun carrying.

Now, guns are a very durable asset, like an exceptionally durable asset, and there are enormous numbers of guns in the United States. So, as a matter of gun policy, sometimes you hear, "Oh, well, we should somehow, you know, ban the purchases of guns." But then, you know, well, you know, the, the country is saturated with guns already, so how would that make any difference?

So my question is basically about, you know, the, the gun carrying. You know, the murder rate has come down, so maybe that must be because the gun carrying has come down. So I guess we need to figure out this issue of gun carrying as opposed to just gun ownership. I mean, gun ownership is kind of a lost cause by now but what do we know about gun carrying?

You know, it seems this notion that there was a spike in purchases of guns and a spike in gun carrying at the same time seems to suggest that people that just bought a gun are more likely to carry the gun or something along those lines. But what do we know about those kinds of facts?

I think those are all the questions for now, so let me turn it over to Jens.

LUDWIG: Great. Thanks. Thanks so much to the discussants and everybody else for the helpful questions. Let me, let me just take things in in order. So maybe the first thing to say

is we don't--- I suspect that the link between economic conditions and homicide may very well differ across countries.

So I think the descriptive fact that most murders in America are expressive rather than instrumental is an important part of my own thinking about what's going on here. If you go to Central America or South America, the mix of instrumental versus expressive might be very different, and the role of economic conditions then might be very different.

Let me just talk you through very briefly the evidence for the conclusion for why in the US context, surprisingly, it does not look like there's a relationship. If you take state by year panel data and you regress homicide against unemployment rate, like Chris Ruhm has a famous paper in the QJE in 2000 with the title, "Are Recessions Good for Your Health?" Unemployment goes up, homicide rate goes down. And I think that's because if your mental model of homicide is people go to the bar, they get drunk, two in the morning, everybody's out in the parking lot, and something happens. People go out to the bar less often, you have fewer homicides.

So if you take that Chris Ruhm coefficient and you do the Justin Wolfers exercise, you would say, "Gee, the murder rate should have fallen dramatically when the unemployment goes up." If you look at randomized control trials of social programs that give people coming out of prison temporary jobs, sometimes you see a reduction in property offending. You don't can see a change in violent crime.

And so maybe that would be the one sort of footnote I would say to Felipe's comments is, I think it's really important to-- I would never use the word offending or crime now that I've sort of had this mindset shift, because I really do think, like, crime is like disease as a word. It's just not helpful because it captures things that have just very different causes and consequences. So I'd be thinking of violent offending or property offending rather than just crime or offending.

Maybe the just final example is we have tons of studies using variation in social program eligibility, generosity, when they pay out benefits twice a month versus once a month. Again, you see changes in property offending, no change in violent crime. So that's the empirical basis for why I say in the US context, again, it could be different somewhere else. I think if Justin Wolfers says that the argument is so obvious, why did I write the paper? I take this as a win 'cause this is not an argument that I've heard anybody articu-- Like, I hear everybody talking about changes in economic conditions and looking at what's going on in the criminal justice system.

So if you look at this and say, "This seems right, I don't even know why you write this," I my work here is done. I do think, like, I wanna tie together something that I said and Marcela said that might have gotten lost. It is true that we had this massive COVID weirdness that everybody experienced everywhere. I do think the thing that is so unique to the U.S. context is that happened against a backdrop of a country of 330 million people having something like 400 or 500 million guns in circulation. And people now feeling like for whatever reason, they're going to carry these in.

So most homicides in the U.S. happen in public with guns. That's where most arguments happen in the U.S. as well. So you get way more guns out on the streets. That increases the lethal consequences of the interpersonal weirdness, conflict, whatever you wanna call it,

that's happening. That would be my hypothesis for why you're looking around at other countries and not seeing the same thing.

I think Canada, to some degree, also had a little bit of this as well. So when you look at like the UN reports on this, they talk about North American exceptionalism, not just United States exceptionalism.

Maybe the last thing that I will just, I think I'll just say maybe two last things. The role of gender is a huge puzzle, right? I mean, it's interesting to see very sizable percentage changes in homicide. We don't have good measures of homicide offending because the clearance rate is so bad in the U.S. So that's like a big black box. When you look at victimization, you see big changes to women and to men. We don't know to what degree that is driven by male offender. So, the role of gender in general, I think, is just a big puzzle. The, you know, the only-- the, the main hypothesis I have for it is testosterone poisoning. I don't know what else you know, we don't have an RCT that we can point to, to, on, on the gun policy question, maybe the [off-mic talking]

Perfect. I let me just end with with John's question about about gun policy. So I think the role of gun purchases and the role of policy to change gun purchases is looking at the COVID data, maybe I'm a little bit less sure that controlling gun purchases, were we able to do it, would have no effect. So let me just talk you through, 'cause I had so little time, let me just talk you through a little bit of the puzzle. So handgun sales go from something like 8 million a year in 2019 to something like 14 million a year in 2020. So there's a way to look at that, to your point, John, which is like, if you have 4 or 500 million guns in circulation, what in the world is another 6 million guns gonna do? This is literally just a drop in the bucket, would've been the way that I would've thought about it.

And there's a amazing guy named Jeff Asher, who just is a great source of all sorts of crime data on his on his website. And he managed to track together multiple years of ATF data. This is the Bureau of Alcohol, Tobacco, and Firearms data on what's called short time to crime guns. So guns that are confiscated at a crime scene that were bought within two years of being found at a crime scene. So, and what you can see in the pandemic is that there's some-- If I'm remembering the statistic correctly, there's something like a 50% increase in short time to crime guns in the pandemic. So one possibility is that you had a bunch of, like, we had an unusual set of people buy guns, and they were disproportionately affected by whatever weirdness is happening during the pandemic. That's one possibility.

But we also know, going back to at least the 1970s, that it seems like criminals have a preference for new guns because nobody wants to get caught with some previous owner's crime gun, right? So if the cops catch you with a gun that was used in a previous murder, they've just arrested a suspect, whether you're the one who did it or not, right? You with the gun is enough for them to make, is maybe enough for them to make the arrest and worry about the details later. But I think the surprising thing here is could it really be that criminals have such a strong preference for new guns? I don't know, right? But I think seeing the big delta in short time to crime guns makes me wonder what's going on and maybe makes me update in the direction of uncertainty about whether reducing new gun sales might have more effect than I had at least long thought, consistent with your intuition.

STEINSSON: So I think we have a little bit more time. Gerald has a question.

AUDIENCE: I just have some some questions of clarification. So my... I think I've seen the-- Or, how many, how much gun violence is some where the, the two people know each other, so there is some relationship between the victim and the the criminal and the victim?

And then, and how much of that is also gun on gun, where both the victim and the, the criminal are or perpetrator, both have guns? Is that high, low, and are the, do people have similar economic circumstances? Like, is there, are there relationships between the two individuals that we should be thinking about?

LUDWIG: Yeah, I would say there's a huge amount of, I'm not sure I'm gonna use the word homophily correctly here, but there's a huge amount of the, the offenders and the victims are much more demographically and economically similar than different. It's the FBI categoriza- So again, keep in mind there's a lot of uncertainty about the relationship between the offender and the victim because so many of the homicides are not getting cleared. Thirty years ago, we would clear something like 90% of murders in America, and now it's closer to 50%, and in many years in Chicago, it's notably lower than 50%. So there's a lot of uncertainty. And the FBI categorization is not super helpful. You know, the boundary between stranger and acquaintance, you know, a lot of these are arguments like kids in the same high school or rival high schools run into each other at a movie theater, and somebody gets into an argument and winds up dead. It's just a little bit hard to know even exactly how you would wanna classify that.

[off-mic talking]

Oh, yeah. Great great question. So, in, in Chicago is, I think one implication of this, it's like the offenders and the victims are drawn from largely the same population. So something like 90% of homicide offenders have a prior arrest record, 80% of the victims have a prior arrest record as well.

And in an environment in which so many people are carrying guns, the typical sort of shooting that you will have in Chicago is you'll have a bunch of guys standing around on a corner or in a park or sitting in a car or whatever it is, and one or two guy- or getting gas at a gas station. The Chicago Police Department website is full of security camera footage with shootings like this.

You will see one or two guys in masks creep up on the group and open fire, and then the group being fired upon will return fire. That's basically... And so it's often over some fight over a girl or whatever it is.

STEINSSON: Okay, so let's break and we will reconvene at 4:00 PM.