INTRODUCTION

Gun homicides have declined dramatically since the 1990’s, but gun violence remains a major issue of public concern. Political leaders often propose longer criminal sentences for illegal gun possession. They argue that sentence enhancements will decrease violence, even though sentence enhancements are not well-supported by social science research.

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Many states have passed sentence enhancements for gun crimes and gun-carrying, and multiple states continue to consider new firearm sentence enhancements. These tough-on-crime policies come at a high cost: the United States’ standing jail and prison population was 2.2 million people at the end of 2013. The country spent more than $75 billion on corrections in 2008 alone. Proponents of mandatory minimum sentencing and sentence enhancements believe that imprisoning more people substantially reduces crime. Much is at stake in this debate: many lives hang in the balance, including those of people who might be freed or imprisoned, and those of potential victims of violence.

In October 2013, Jens Ludwig, director of the University of Chicago Crime Lab, published a memorandum arguing that possession of illegal firearms was under-punished in Chicago. By increasing the length of imprisonment for people caught illegally carrying firearms, he claimed we could save lives and reduce violent crime. Ludwig claimed an apolitical position in the public debate, insisting that his only role was to share the nonpartisan results of social science research. This claim was enhanced by his role at the University of Chicago Crime Lab, a major research and policy institution that works with Chicago political elites on violence prevention programs.

Ludwig’s estimates predicted dramatic declines in violence. But he did not account for the many ways in which imprisoning people can lead to new violence. A deeper analysis of Ludwig’s assumptions reveals that he fails to grapple with large, relevant domains of the “best possible social science research,” leading to a badly skewed estimate.

In this Article, I describe the Chicago gun sentencing debate in which Ludwig’s memorandum played a central role. I argue that Ludwig wrongly takes “incapacitative” crime reduction for granted, failing to consider many ways in which imprisonment increases crime. Then,
I analyze Chicago neighborhood-level data to test the connection between gun-carrying punishments and violent crime rates. Next, I argue that Ludwig’s advocacy is not apolitical, but has political and ethical dimensions. Finally, I conclude with a brief discussion of the long legacy of Ludwig’s memorandum.

In public debates over policy, social science research rarely speaks for itself. The “who” and “how” of advocate and researcher participation shapes the questions asked, the values invoked, and the conclusions reached. Ludwig’s memorandum—and the unusual public debate about the role and motivations of social science researchers—presents an opportunity to consider both the research and the researcher simultaneously.

I. CHICAGO IN THE SPOTLIGHT: THE SENTENCE ENHANCEMENT DEBATE

Chicago is known for deadly gun violence, locally and nationally. The city has been referred to as the “murder capital” of the United States, even though several large cities have substantially higher homicide rates. Chicago’s homicide count jumped from 480 in 2015 to 762 in 2016; the 2016 homicide rate was the highest in 19 years. Popular explanations for the increase include: social media driving conflicts among gangs and young people; a purported “gang culture” that leads young people to join gangs and commit violence; segregation, poverty and a lack of effective resources in the poorest communities; and insufficiently harsh punishments for illegal gun-carrying.

The country’s attention turned to Chicago when Hadiya Pendleton was shot and killed on January 29, 2013. Only a week earlier, the 15-year-old honors student had performed at President

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Obama’s inauguration. Michelle Obama flew to Chicago to attend Hadiya’s funeral on February 9th, and President Obama invited her parents to attend the State of the Union address three days later.

Later that month, HB2265 and SB2267 were introduced in the Illinois House and Senate. The bills imposed a mandatory minimum penalty of three years for most gun-carrying crimes and required individuals convicted of these offenses to serve at least 85% of their sentence.

Chicago political leaders mobilized in support of the bill. At a press conference, Mayor Rahm Emanuel called for “stiff penalties for gun crimes,” stating, “we need to make sure that once the crime is committed, not allowing [sic] those individuals [who carry illegal guns] back on the streets.” Chicago police chief Garry McCarthy published an editorial supporting 3-year mandatory minimum penalties for illegal gun possession, writing, “is an inescapable fact that if the proposed three-year mandatory minimum sentence for aggravated unlawful use of a weapon (AUUW) had been in effect last January, the individual responsible for Hadiya’s death would have been in jail and Hadiya would be alive.”

Crime policy researchers from the University of Chicago joined the debate, speaking in favor of harsher punishments for gun-carrying. Harold Pollack, co-director of the University of Chicago Crime Lab, testified before the Illinois House Judiciary Committee in March 2013. He
stated, “. . . illegal gun-carrying is not consistently met with the swift, certain, or serious sanctions we need to impose. Strengthening penalties for gun crimes is thus a promising strategy for deterring illegal gun-carrying. . . .” 24 Pollack concluded that punishments for gun-carrying needed to be both more certain and more severe to successfully decrease gun violence. He also reminded legislators that Hadiya Pendleton’s accused killer had recently been arrested for gun possession. 25

The proposed bills were met with a cautionary prediction from the State’s sentencing policy advisory body, the Illinois Sentencing Policy Advisory Council (SPAC). 26 Their analysis estimated that the bill would cause 6,083 additional people to be imprisoned annually, costing approximately $130 million per year. 27

Jens Ludwig, Director of the University of Chicago Crime Lab, published a memorandum on October 7, 2013 to argue for the benefits of the proposed bill. 28 Using a cost-benefit analysis, he claimed that the unique dangerousness of people who illegally carry guns makes it especially valuable to imprison them for longer periods of time. Ludwig calculated that HB 2265 would deliver a five-to-one return on investment and prevent 400 serious violent crimes annually. Eight days later, he published an editorial in the Chicago Tribune explaining his findings. He presented the proposed law as a clear and certain boon to Chicagoans:

The University of Chicago Crime Lab, which I direct, analyzed data on people placed on probation for illegally carrying a gun in Cook County. These are the people who would wind up in prison under the proposed law. Our research finds that at least 3,800 crimes, including more than 400 serious violent crimes, would be prevented each year in Illinois because the people who would commit those crimes would be in prison. 29

Ludwig stated no assumptions and cited no other research, except to say that, “A growing body of research suggests that increased certainty of punishment deters crime, including gun crime.” 30 To the extent that he admitted uncertainty, he allowed only that he may have underestimated the benefits of the new law. 31

Numerous law professors, social scientists, and policy experts responded to object to

25 Id.
28 LUDWIG, supra note 6.
30 Id.
31 Id.
Ludwig’s analysis. Criminologist and law professor Franklin Zimring responded the next day with an editorial in the Chicago Sun Times. Among other points, Zimring argued that Ludwig largely relied on studies that did not analyze sentence enhancements but considered other interventions instead.\textsuperscript{32} In other words, Zimring argued that Ludwig relied on analogies from research on different kinds of programs instead of considering the substantial sentence enhancement research that already existed.\textsuperscript{33} Separately, 32 Chicago-area academics in law and social science signed on to a paper opposing Ludwig’s conclusions.\textsuperscript{34} Their paper reviewed the pertinent literature and found no evidence that mandatory minimum sentences or sentence enhancements are effective in decreasing violence.\textsuperscript{35} It also addressed the “noticeable and devastating” impact of mass incarceration: the intensive, geographically concentrated use of imprisonment within communities, especially black, poor communities.\textsuperscript{36}

In a lengthy exchange recorded on a Chicago Tribune blog post, Ludwig responded that the empirical research cited by his opponents was “not very good.”\textsuperscript{37} He also rested on his incapacitation argument, saying that the sheer value of keeping dangerous people locked up justified the economic costs.\textsuperscript{38} Finally, Ludwig defended his role as a neutral evaluator of criminal legal system policy. Ludwig wrote, “. . . as I have emphasized before neither I nor the Crime Lab is taking an official stand about this or any other piece of legislation, so much as just trying to provide people with the best possible social science findings to help inform their assessments of the bill.”\textsuperscript{39} Ludwig claimed a position as neutral party and authority in the debate.

Other participants in the public debate challenged Ludwig’s self-assessment. John Maki, Executive Director of the John Howard Association (an Illinois prison monitoring and criminal justice reform organization) wrote, “I don’t think that accurately describes the role [Ludwig] or his organization is playing in this debate, which is one of the primary pieces of a public relations campaign designed to pass a symbolic tough-on-crime bill. . . .”\textsuperscript{40} Maki argued that Ludwig and his Crime Lab team must have understood how important their analysis and endorsement was to the political case for higher gun sentences.

A few months later, in January 2014, SPAC weighed in by publishing a “Trends Analysis” analyzing whether increases in penalties for illegal gun-carrying were associated with decreases in violent crime. The report noted that Illinois gun sentences were increased five times between 2000 and 2012.\textsuperscript{41} Comparing Chicago to other cities, the authors found no evidence that increased

\textsuperscript{33} \textit{Id.}
\textsuperscript{34} STEPHANIE KOLLMANN & DOMINIQUE D. NONG, \textit{COMBATING GUN VIOLENCE IN ILLINOIS: EVIDENCE-BASED SOLUTIONS}, NW. L. BLUHM LEGAL CLINIC (2013), http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?filename=3&article=1000&context=jclc_symposium&type=additional [https://perma.cc/W3D7-JN22].
\textsuperscript{35} \textit{Id.} at 2–3.
\textsuperscript{36} \textit{Id.} at 12.
\textsuperscript{38} \textit{Id.}
\textsuperscript{39} \textit{Id.}
\textsuperscript{40} \textit{Id.}
\textsuperscript{41} ILL. SENT’G POL’Y ADVISORY COUNCIL, \textit{TRENDS ANALYSIS: UNLAWFUL USE OF A WEAPON} 2 (2014),
penalties for gun-carrying reduced violent crime.42

Ludwig and the Crime Lab stood alone among researchers and academics in supporting gun sentence enhancements. Others contested the costs and benefits Ludwig ascribed to the policy and emphasized the other frames in which the policy could be considered, including its contribution to mass incarceration. But despite the countervailing evidence, Chicago political leaders including the mayor continued to push for sentence enhancements as a violence reduction strategy.43 Ludwig’s estimate matters because it legitimated a political push for an imprisonment-based strategy, allowing the Mayor’s Office to claim research-based support for its preferred policy.

II. IS INCAPACITATION “MECHANICAL?”

When 6,000 additional people are imprisoned due to a new policy, the results will be difficult to predict. Social science provides some tools to model the effects of this sudden disruption. If the motivators of gun-carrying are primarily structural, driven by local social and economic contexts, then imprisoning people who carry guns will do little to reduce rates of gun-carrying, and therefore, violence. If instead, gun carriers are the bad apples that spoil the bunch, then imprisoning them should substantially reduce gun-carrying, both by incapacitating the gun carriers and discouraging others from following their examples.

Ludwig’s methodology compares the cost of imprisonment to the estimated financial benefits of prospectively prevented crimes. Ludwig takes for granted that the key cost of imprisonment is the money spent by the State to imprison, and that the key benefits should be measured by surveying people about their hypothetical willingness to pay to prevent crimes.44 By adopting this methodology, he accepts that it is better to imprison thirteen people for a year each (at a cost of $280,800) than for one robbery to be committed (at a “social cost” of $287,000).

Of course, this is not the only way to analyze the merits of a proposed policy. In this section, I continue to analyze and engage with the core claims of Ludwig’s estimate, while using diverse sources to challenge Ludwig’s hypothesis and argue that mass imprisonment of gun-carriers will lead to new sources of violence.

In this section, I first directly challenge Ludwig’s evidence for the impact of sentence enhancements. Second, I argue that incapacitation is not as effective as Ludwig predicts. Third and fourth, I draw on diverse social-scientific research to consider the problem of “substitution violence”: the many ways in which the vacuum left by 6,000 imprisoned people might increase violence in neighborhoods. I present both a “status tournament” theory and a “gang disruption” theory for how this substitution may occur. Fifth, I argue for the criminogenic effects of imprisonment, especially in the medium-to-long-terms. Finally, I reflect briefly on the political qualities of Ludwig’s estimate.

[https://perma.cc/KZG5-U44Y].

42 Id. at 14.


44 LUDWIG, supra note 6, at 4 n.15.
A. Weaknesses in Ludwig’s Case for Sentence Enhancements

There are important strengths to Ludwig’s hypothesis. He makes smart use of well-established facts and theories about gun violence. The large majority of Chicago homicides are committed with handguns, and the large majority of these homicides arise from spontaneous altercations, not crimes like robbery or premeditated violence. It is believed that, because gun violence is spontaneous and dispute-based, reducing the number of people who regularly carry guns is critical to violence-reduction. Ludwig quotes criminologist Lawrence Sherman, who writes, “To the extent that homicide frequently occurs spontaneously among young men in public places, it is the carrying of firearms, rather than the ownership, that is the immediate proximate cause of criminal injury.” This analysis suggest that reducing gun-carrying is the key to reducing gun violence.

Violent crime and gun-carrying are closely linked. The below two maps show rates of serious violent crime and per capita convictions for illegal gun-carrying across Chicago zip codes:

Figure 1: Gun Convictions Concentrated on West and South Sides

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45 LUDWIG, supra note 6, at 1–2.
46 Lawrence Sherman, Gun Carrying and Homicide Prevention, 283 J. AM. MED. ASS’N. 1193 (2000).
As the two maps demonstrate, ZIP codes with the highest rates of serious violence also have the highest rates of gun convictions. (The methodology for collecting the data to produce both maps is explained in Section IV). Ludwig is right to identify a close link between gun-carrying and violent crime. The question is whether sentence enhancements are likely to substantially decrease gun-carrying.

First, Ludwig attempts to convince the reader that current lengths of imprisonment for gun carriers are not long enough to deter gun-carrying. Ludwig notes that some people convicted for illegal gun-carrying receive probation, and that those who are imprisoned serve an average of 0.33 to 1.5 years in Illinois prisons, depending on the specific offense and whether the conviction was for a first or subsequent offense.47 Many of these individuals are also imprisoned pretrial, so this estimate does not fully capture the length of their imprisonment.

Ludwig attempts to prove his point that longer sentences lead to more deterrence through a discussion of Project HOPE. Project HOPE was an experiment in Hawaii about reducing probationer recidivism. The theory behind Project HOPE was that punishment for probationers was too unreliable: probationers were rarely punished for violating the conditions of probation, but when

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47 Ludwig, supra note 6, at 3.
they were, the punishment could be severe, up to months or years in prison. Project HOPE used swift, certain and very short (a few days or weeks in jail) punishments for probation violation. The experiment was effective: probationers assigned to HOPE were significantly less likely to have their probation revoked. However, Project HOPE did not prove anything about the effect of longer sentences. A very small, rapidly delivered, and certain punishment was all that was needed. Ludwig tries to link the two by saying that Chicago gun punishments are variable and inconsistent. But the analogy fails. The Project HOPE researchers wrote: “All too often probation practices effectively allow hard-drug-abusing criminals to continue using drugs with impunity . . . sanctions are too rare and too delayed. When sanctions are imposed, they tend to be too severe (months, or occasionally years, in prison.” As the researchers go on to explain, Project HOPE is an experiment about how, so long as punishments are consistently given, they can be extremely effective even if they are quite minor. The results suggest that shorter sentences are just as good, if they are consistently applied.

Unlike the Hawaii drug probationers who committed violations but avoided punishment, all Chicagoans convicted of illegally carrying guns are punished. Almost all spend time in jail awaiting bond hearings, plea bargaining, or trial. As Ludwig describes in his own memorandum, 75% of illegal gun-possession defendants are imprisoned and 14% receive probation. A few receive lighter punishments—four percent are sentenced only to community service—but no one who is convicted for illegal gun possession escapes punishment. And sentence enhancements do not increase the likelihood of punishment. Sentence enhancements are only an investment in imprisoning individuals, not finding and prosecuting gun carriers. Ludwig concludes this section by writing, “Any measure capable of reducing [variability in gun sentences] and increasing the consistency or certainty of sanctions would be expected to help reduce gun-carrying through deterrence.” But he rests on weak foundations, because the proposed bill does nothing to increase the certainty of sanctions.

Ludwig relies on just a few other pieces of research to build his case. These include studies from 1977 and 1980 of a Massachusetts mandatory minimum law, and a 2003 study of anti-gun police patrols. The limited empirical support Ludwig is able to muster speaks to the absence of good social science supporting the efficacy of sentence enhancements, and to the weakness of his deterrence arguments.

B. Research Does Not Support Incapacitation as Crime Control

In 1995, John DiIulio coined what he called Wattenberg’s Law: “A thug who’s in prison

49 Id. at 5-6.
50 Id. at 4.
51 Id. at 5.
52 Id. at 6.
53 LUDWIG, supra note 6, at 3.
54 Id.
55 Id. at 2–3.
can’t shoot your sister.”

Almost twenty years later, then-Police Superintendent Garry McCarthy used the same logic: if only we punished gun sentences more harshly, Hadiya Pendleton would be alive today.

To some, it is obvious that imprisoning people who have acted violently will keep communities safer. But despite its appeal, incapacitation-based approaches to violence reduction are not well-supported in the literature.

Ludwig argues that even if there is no deterrence effect of sentence enhancements, the incapacitation benefits alone make the proposed law a clear win. Ludwig analyzes data on 340 Chicagoans convicted of aggravated unlawful use of a weapon and sentenced to probation. He finds that many of the individuals in the group were arrested for serious crimes within one year of their probation sentence, including three murders, one criminal sexual assault, fifteen aggravated assaults and six robberies. He calculates the social cost of this recidivism to be $39.3 million, or $115,602 per probationer. This “social cost” is more than five times the $21,600 incremental cost per person-year of imprisonment. From an economic standpoint, Ludwig argues, imprisoning gun carriers is an incredible bargain.

Ludwig assumes that if the gun probationers had been imprisoned, crime would decrease in their communities by at least the number of crimes they “would have” committed on probation. He refers to these benefits as mechanical, like a natural law. “Incapacitation is the mechanical crime-reducing effect that arises because people in detention are physically prevented from committing crimes against the general public,” Ludwig writes. Certainly, imprisoned people are rarely able to commit crimes against people who are not imprisoned. But Ludwig cites no studies establishing incapacitation as a “mechanical,” certain force in the world. When a person is imprisoned, the outside world does not continue as it would have with that person in it. Instead, a vacuum is created where that person would have been. And, as studies of imprisonment do not suggest that sentence enhancements effectively reduce crime, there is reason to believe that the vacuum does not remain unfilled.

Although Ludwig describes the effect of incapacitation as “mechanical”—akin to DiIulio’s “thug in prison” theory of crime prevention—the range of possibilities is much greater than he admits. Consider, for example, that people who shoot people are also at increased risk of being shot. If gun carriers both commit shootings and provoke them, then locking up a gun carrier will reduce crime by more than just the crimes he would have committed. On the other hand, imagine that a convicted gun carrier is a member of a gang and the gang recruits a new member because of his conviction. As part of the recruitment process, they thrust the new member into conflicts with

58 LUDWIG, supra note 6, at 4. Ludwig uses police arrest data to calculate recidivism, assuming that all of the arrests reflected crimes committed by arrestees. Of course, his estimate only reflected crimes that led to arrests, not crimes that probationers “got away” with. Given Chicago’s homicide clearance rate of around 26%, these numbers may substantially underestimate the homicide rate among these probationers. Noah Isackson, Chicago's Criminals Are Getting Away With Murder, CHI. MAG (Mar. 25, 2013), http://www.chicagomag.com/Chicago-Magazine/May-2013/Getting-Away-with-Murder[https://perma.cc/B8KF-UACH].
59 LUDWIG, supra note 6, at 4.
60 Id. at 5.
neighboring gangs to test his mettle and judgment. In this situation, incapacitation may lead to more violent crimes being committed.

The above examples have nothing to do with deterrence. Neither involve a person making a judgment about whether to commit a crime based on the risk of punishment. Instead, both situations consider how a person’s imprisonment might affect crime in their community. There is no reason to assume that the “real effect” of incapacitation is equal to the number of crimes that the prisoner “would have” committed. There are many other variables at play.

In the 1970’s, academics like James Q. Wilson argued that prison sentences were too short and too inconsistently imposed to capture the full benefits of keeping criminals off the streets. At the time, criminal sentences were significantly less severe than they are today. People with felony records convicted of robbery sometimes avoided prison altogether, and parole was frequently granted.

Two major efforts to estimate the effect of imprisonment on crime suggested that incapacitation was effective in reducing crime. In two separate studies, Steven Levitt and William Spelman analyzed state prison population data and index crime rates and found that incarceration had a crime reduction effect of about -0.4. According to their estimates, increasing the incarceration rate by one percent decreases index crime by 0.4 percent. But Levitt and Spelman reached this result by inventing an “adjustment” to the calculated rate. They assumed that the crime reduction effect is masked, because in addition to increased incarceration reducing crime, increased crime also increases incarceration.

Bruce Western has challenged Levitt and Spelman’s findings, noting that several other researchers have found a crime reduction ratio closer to -0.1, far smaller than Levitt and Spelman’s estimates. Western argues that Levitt’s crime reduction adjustment is unrealistic because it assumes that rising crime is a primary cause of increases in incarceration. If most of the growth in incarceration occurs for reasons other than increases in the crime rate, then Levitt’s assumption that growing crime rates cause increased incarceration is weakened. Western’s book argues that after 1980, increases in the use of prison, the length of sentences, and the rates of parole revocation were primarily responsible for the US incarceration boom. Rising crime rates, in contrast, are not closely associated with increases in incarceration. Western concludes that even if the prison population had remained constant, about nine-tenths of the 1990’s drop in serious crime still would

63 Id. at 73 (only 27% of convicted robbers with prior criminal records sent to prison in Los Angeles County in 1970).
65 Id. at 181.
66 Id. at 181 (First citing Thomas Marvell & Carlisle Moody, The Impact of Prison Growth on Homicide, 7 Homicide Stud. 205 (1994); then Bert Ueem et al., The Crime-Control Effect of Incarceration: Reconsidering the Evidence, Final Report to the National Institute of Justice (2001)).
67 Id. at 182.
68 Id.
69 Id. at 34–51.
have occurred, an estimate that is in line with many other estimates of the prison-crime connection.\(^{70}\)

There are other reasons to be skeptical that incarceration is very effective in reducing crime. Some researchers are skeptical that any strong association has been proven. Bert Useem, et al. write:

> We lack confidence in existing efforts for several reasons. The key one is the lack of robustness of the regression results. If indeed there were a deep, causal association between prison population and crime rates, minor changes in specification or the years covered would alter only slightly the results. In conducting our own analyses, we did not find this. The significance levels changed, and even the signs reversed, depending on the time period covered, control variables included, and the estimating techniques used.\(^{71}\)

Other researchers have also noted that the effect of incapacitation has not been well-supported. Phillip Cook and Jens Ludwig wrote in 2010, “While the incapacitation effect is easy to grasp, it is not the same as the net reduction in crime stemming from locking up a particular individual . . . Replacement may also be found in other gang- and group- oriented crimes . . . The evidence on this issue is mixed at best.”\(^{72}\) Despite the appeal of incapacitation as a justification for sentence enhancements, the extent of its effectiveness in reducing crime is unproven.

As early as 1994, James Q. Wilson reversed his position on the need for enhanced sentences, stating that doubling the prison population would do little to reduce crime.\(^{73}\) Other research runs the gamut from strongly supportive to deeply skeptical of incapacitation. But one thing is clear: there is no definitive measure of the strength of incapacitation-related crime reduction, and a straightforward, “mechanical” effect has not been proven. Although Ludwig attempts to base his cost-benefit analysis on incapacitation, the assumption that incapacitation substantially reduces crime is neither neutral nor well-supported.

### C. Status Tournaments and Gun Violence

Bill had his close shaves. At the court, he was always running his mouth, dunking on the underregulation rim, then bellowing and beating his chest. One local soldier got tired of the talk, went to the car, and came back swinging an aluminum bat through air. But Bill was cool. He knew that at any moment, he could reach into his dip and unveil the last word.\(^{74}\)

In **THE BEAUTIFUL STRUGGLE**, Ta-Nehisi Coates describes his brother Bill’s experiences as a gun carrier. Bill starts carrying after getting beat up by a group of kids from another Baltimore

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\(^{70}\) *Id.* at 185.

\(^{71}\) USEEM ET AL., *supra* note 66.


\(^{73}\) **BRUCE WESTERN, PUNISHMENT & INEQUALITY IN AMERICA** 177 (2006).

neighborhood. He then realizes that gun-carrying allows him to start conflicts he might have otherwise avoided. One night, drinking with friends at college, Bill’s friend David calls his girlfriend and a man answers the phone, enraging David. Bill encourages David to escalate the confrontation, and the group drives over to avenge David’s honor. They find that the man is bigger and stronger than any of them, but Bill doesn’t back down. Ultimately, Bill ends the conflict by shooting his gun in the air and narrowly escapes apprehension by a campus security officer. The next day, hiding out at his sister’s house, Bill learns that David’s “girlfriend” was not even dating him. David had talked up a relationship that did not exist.

Bill was able to claim a tough identity because he was ready to use lethal violence to protect himself. Knowing that he could effectively repel attacks allowed him to freely escalate conflicts. A gun may be a tool of dominance, allowing young people to freely antagonize others and resist status attacks. In other situations, a gun may support a last desperate effort to protect against beatings and humiliation. One 12-year-old Chicago Public Schools student was caught bringing a gun to school in response to bullying. The student was fighting to survive, not to dominate.

If gun-carrying can be explained in part by status concerns, we can begin to think of gun carriers as occupying a distinct position within some social hierarchies. Those who carry guns will be able to display toughness by antagonizing others and standing up for themselves, knowing that they can deter physical attacks. Gun-carrying may be most valuable for people who harass and attack others and for people who are particularly susceptible to attack and harassment.

This introduction brings into view a “status tournament” theory of gun violence. The status tournament theory can explain why sentence enhancements for gun possession will not substantially reduce violent crime. When a gun carrier is taken off the street, it provides two incentives for others to obtain firearms and compete in the status tournament.

First, gun-carrying may be more valuable when fewer people on the street have guns. A decrease in rates of gun-carrying increases the value of having a gun in status confrontations. Status tournament-involved individuals will obtain guns or carry guns more frequently when the value of doing so increases, and as Ludwig’s memo argues, increased gun-carrying leads to increased violence.

Second, increased imprisonment may create vacuums in the status hierarchy. Instead of competitors automatically being “promoted” when a person leaves the tournament, we might think

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75 Id. at 27–28.
76 Id. at 164.
77 Id. at 165.
78 Id. at 164–167.
80 This observation mirrors theories from economics about the supply and demand for crime. Just as those scholars have observed that increased arrests and imprisonment increase opportunities for crime for others, the removal of status-tournament-engaged individuals through incarceration may incentivize increased gun-carrying and violence. See, e.g., Thomas J. Miles & Jens Ludwig, The Silence of the Lambdas: Deterring Incapacitation Research, 23 J. QUANT. CRIMINOLOGY 287, 291 (2007) (“In [the economic] model the ‘supply’ of criminal activity is an upward sloping function of the net payoff (loot minus expected punishment), while the ‘demand’ for criminal activity slopes downward as potential victims increase protective activities in response to increased risks of victimization. The removal of some offenders from a neighborhood shifts the supply for offenses schedule inward, which expands the criminal opportunity set for other potential or current offenders.”).
of them as competing for the new position, as middle-managers might apply for a junior executive position that opens up. If there is strength in numbers, a powerful group may seek to sustain its strength. Young men who are starting out in the tournament may need at least one or two companions: if their close friends are incarcerated, they may seek replacements who would not have otherwise considered carrying guns. Similarly, if a high-status gun carrier is incarcerated, others may compete to take his spot. Network disruptions may increase jockeying for status, causing additional violence. One need not imagine a rigid hierarchy for this theory to hold; the status hierarchy might be local, contested, understood in different ways, and unknown to most people.

Increases in violence following gun carrier incarceration can be explained by two related concepts: stability and churn. Stability refers to the network of relationships that exists in a community at any given time. Research shows that neighbors understand the social positions of people in their networks: who leads a social group or a gang, who is influential, who is a wanna-be. One study asked local residents, gang members, and criminal justice system personnel in Chicago neighborhoods to rank gangs by status, and found that all three groups produced the same rankings.81 This idea is central to the concept of the “code of the street”: a person can only build a reputation if others know about it. The removal of a high-status gun carrier may force a reconfiguration: now that he is gone, who will his friends rely on for support? If he was the toughest of his friends, who is the toughest now?

Churn refers to the rate at which people enter and exit the status tournament. People age out of gangs, and younger kids enter them. People leave town, and relationships wax and wane. Over time, people occupy different identities and roles relative to one another. Increased imprisonment may accelerate churn. With more vacuums to be filled, more people will enter the tournament more quickly. New competitors entering the tournament may be more inexperienced, and perhaps not as knowledgeable about how to push a confrontation to its brink without getting hurt or killed. This inexperience may increase the rate of violence.82

The imprisonment of a gun carrier might also decrease the motivation of other residents to carry a gun or “enter” the status tournament. The same people being incarcerated for gun-carrying might be responsible for the social context that ties status to gun-carrying, and the imprisonment of these individuals might dramatically change the social context. But even if the motives for gun-carrying were weakened in part by incarceration of gun carriers, there still might be associated “churn,” a reconfiguration and jockeying for status among those still participating in the status tournament, resulting in increased violence. Additionally, the churn associated with short prison sentences—the reentry of gun carriers into their communities following imprisonment—might also create violence-increasing churn. The question is whether the disruptive effect of recruiting new status competitors is stronger than the disruptive effect of a status competitor reentering the competition post-imprisonment.

For the status tournament theory to work, it must be shown that gun-carrying and a willingness to use violence are connected to status, which would explain the instrumental usefulness of guns. An explanation is also needed for why anyone would choose to carry a gun.83 Although the

81 See Solomon Kobrin et al., Criteria of Status Among Street Groups, 4 J. Res. Crime & Delinqu. 98 (1967).
82 It is also possible that experience in gun-carrying and status-seeking does not decrease one’s risk of experiencing violence. See also Jack Katz, Seductions of Crime 165 (1988) (noting that people who commit robbery are arrested once for every five-to-ten robberies they commit and that even robbery ‘experts’ face very high risks of arrest and imprisonment.).
83 Although a “rational actor” analysis can help in theorizing the connection between status-pursuit and gun-
usefulness of a gun to avoid victimization is clear, gun-carrying is also likely to result in injury, death, and imprisonment.

Research on gun-carrying and gun violence suggests that status and hierarchy concerns do motivate gun violence. Much gun violence is caused by “beef,” interpersonal conflicts and retaliation for past violence that is not directly connected to instrumental disputes about drugs or money. Studies of Chicago gang homicide have shown that 97.5% of all gang homicides resulted from arguments or altercations, not disputes over money, property, or drugs, compared to 67% of other homicides.\(^84\) Additionally, 50-60% of Chicago homicides are gang-related, and these homicides are increasingly committed between members of smaller, more fractured gangs.\(^85\)

Additionally, gun carriers have rational motivations for gun-carrying. Wilkinson and Fagan have described the “scripts” that young people use when deciding how to carry and use guns, and the reasons they give for gun-carrying.\(^86\) These reasons included projecting a “tough” image, seeking power and dominance, and self-defense and protection.\(^87\) For example, some of the young people interviewed by Wilkinson and Fagan reported that they started carrying a gun after being victimized.\(^88\) All of these are rational motivations for carrying firearms.

The links between violence and status for some boys and men in poor segregated urban neighborhoods have been extensively documented. Elijah Anderson argues that because poor carrying, researchers have identified many motivators for crime and gun-carrying among young people, not all of which are easily classifiable in terms of instrumental rationality. See, e.g., VICTOR RIOS, PUNISHED: POLICING THE LIVES OF BLACK AND LATINO BOYS 102 (2011) (exploring theories that classify crime and “misbehavior” among young people as “resistance identities,” a practice of “contesting a system that sees them as criminals”); BERNARD HARCOURT, LANGUAGE OF THE GUN 58–59, 94–95 (2006) (Finding after sharing photos of guns with boys in a juvenile jail and conducting open-ended interviews with them that the boys associated guns with three clusters of meaning: action and protection, commodity and dislike, and recreation and respect, all of which connect to very different motivators for gun-carrying. Also concluding that there exist “sensual” elements of guns and gun-carrying, including the feel of the weapon, the tension of holding one in a situation of conflict, and the exhilaration and thrill of violence.).

\(^84\) Andrew Papachristos, Murder by Structure: Dominance Relations and the Social Structure of Gang Homicide, 115 AM. J. SOC. 74, 91–92 (2009). Note that the methodology used by Papachristos to identify noninstrumental homicide is open to question. Although disrespectful graffiti could be viewed as noninstrumental, gang members might reasonably believe that they will be attacked or lose drug territory if they do not contest even “symbolic” attacks on their turf. Compare Andrew Papachristos, Murder by Structure: Dominance Relations and the Social Structure of Gang Homicide, 115 AM. J. SOC. 74, 91 n.19 (2009) (“Turf considerations for a gang are considered instrumental if they relate to drug dealing or other economic interests and are expressive if the turf violation involves use by a nonmember or noneconomic disputers (e.g., disrespectful graffiti on turf”), with ROBERT VARGAS, WOUNDED CITY, 158–59 (2016) (“[I]nterviews with Latin Kings at Youth Inc. revealed that the absence of 22 Boys on street corners was the factor that spurred violent competition over the turf... Eusebio, a Latin King, described...”).


\(^87\) Id.

\(^88\) Id. at 84.
children often have fewer methods of self-expression, they are more likely to form identities through interpersonal conflict. In this often violent give-and-take, raising oneself up largely relies on putting someone else down,” writes Anderson. In what Anderson refers to as “staging areas”—neighborhood hangouts, business districts, or large gathering areas like sports events or movie theaters—people may dare each other into confrontations, challenging strangers from other neighborhoods. These public places offer a chance to show off to others and build status. Anderson also mentions that young people who are “campaigning for respect” often bring guns or other weapons to staging areas to support their bids for status.

Other research has affirmed the importance of staging areas. One study found that 74% of serious gun assaults in Boston occurred across just 5% of the city’s intersections and street segments. This data is consistent with the hypothesis that young people intentionally seek public spaces to campaign for status and bring firearms when they do so.

A similar connection is described by Fagan and Wilkinson, who characterize a “wild” or “killer” identity as sitting on top of the “identity hierarchy of the street.” They write, “The perpetuation of the sense of self and the image in the minds of others also is an instrumental goal of much weapon use . . . Some subcultures or networks may also reflect norms in which excessive violence, including weapons use, is valued, gains social rewards, and gives great personal pleasure.” This violence, they clarify, is not “senseless,” but a means to an end.

Robert Garot describes the gang-related practice of walking up to a stranger and asking “Who you claim?” or “Where you from?” The question introduces a powerful uncertainty. Claiming the wrong gang or neighborhood may lead to a mugging or a beating. Even the “right” answer—responding with “Nowhere,” or “I don’t bang”—may lead to the same. If the respondent “ranks out” and denies gang membership, he is submitting to the instigator, whose status is thereby enhanced.

People who compete for status do not always seek confrontation and will resolve many conflicts without violent escalation. Garot writes, “One’s face is always on the line in a violent confrontation. Few can be the ‘baddest’ or the ‘hardest,’ and many would not want to be; such a stance cannot be sustained indefinitely.” It may be that almost all gun carriers in Chicago would prefer to never use their weapons, even as status and hierarchy concerns motivate violence. Additionally, since most gun violence is perpetrated by a small number of individuals, one can imagine that distinctive, hyperlocal social contexts drive violence without being reducible to a

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90 Id. at 75.
91 Id. at 77–78.
92 Id. at 79.
95 Id.
96 ROBERT GAROT, WHO YOU CLAIM 70 (2010).
97 Id. at 71–72.
98 Id. at 72.
99 Id. at 142.
single paradigm.\textsuperscript{100} In other words, the above framing is meant to suggest one way of understanding the drivers of violence, not to occupy the field among those theories.

But how can the rewards for gun-carrying outweigh the risks? The rewards seem modest: either increased freedom from abuse or popularity. In contrast, the risks are enormous: crippling injury, death, and imprisonment. Tournament theory offers an explanation for why people accept high risks in pursuit of a prized position.

Levitt and Venkatesh demonstrate that a low chance at meaningful returns can motivate participation in dangerous activities. An analysis of a drug-selling gang’s financial records revealed that street-level “foot soldiers” were paid only slightly more than minimum wage but faced a very high risk of death: around 7\% annually.\textsuperscript{101} Many of the foot soldiers also held jobs in the legal employment sector.\textsuperscript{102} Although foot soldiers understood the risks of drug dealing and demanded higher wages at times of conflict,\textsuperscript{103} the rewards were modest in light of the risks.

To explain the seemingly irrational choices of foot soldiers, Levitt and Venkatesh invoke the idea of a tournament. A quote from a foot soldier illustrates this framing: “You think I wanta be selling drugs on the street my whole life? No way . . . people don’t last long doing this shit. So, you know, I figure I got a chance to move up.”\textsuperscript{104} Levitt and Venkatesh note that gang leaders earn substantially more than foot soldiers, and serving as a foot soldier offers a chance at advancement.\textsuperscript{105} The authors note the possibility that acts of heroism or intelligent risk-taking during periods of gang warfare may increase the odds of promotion.\textsuperscript{106} This model may be efficient from the perspective of leaders, who seek to identify the best talent and promote it.\textsuperscript{107}

The rewards of winning in the status tournament may include respect, esteem, sex, or financial rewards. For some, they may be connected to shedding a victim or punk status and avoiding victimization. Improving one’s ranking at any level, whether from a victim to a weak but resilient fighter, or from tough to very tough, may have benefits. There is also the motivation to make “something out of nothing” or to “get from here to there” by claiming the power to “transcend limitations and ridicule through incontrovertible dangerousness.”\textsuperscript{108} Victories in the status tournament may allow young people to establish an identity when other paths to success are denied.\textsuperscript{109}

\begin{thebibliography}{99}
\bibitem{100} Braga et al., \textit{Deterring Gang-Involved Gun Violence: Measuring the Impact of Boston’s Operation Ceasefire on Street Gang Behavior}, 30 J. QUANTITATIVE CRIMINOLOGY 113, 115 (2014) (citing problem analysis research demonstrating that 1\% of residents aged 14–24 are responsible for large portion of Boston homicide).
\bibitem{102} \textit{Id.} at 771–72.
\bibitem{103} \textit{Id.} at 778.
\bibitem{104} \textit{Id.} at 773.
\bibitem{105} \textit{Id.} at 757.
\bibitem{106} \textit{Id.} at 785.
\bibitem{108} ROBERT GAROT, \textit{WHO YOU CLAIM} 178 (2010) (citing first RALPH CINTRON, ANGELS’ TOWN: CHERO WAYS, GANG LIFE, AND Rhetorics of the Everyday (1997); then citing JACK KATZ, SEDUCTIONS OF CRIME (1988)).
\end{thebibliography}
In considering this hierarchy, we must remember that some youth do not compete for status through aggression, while others may flit in and out of the competition, trying on and abandoning different identities over time. Garot describes a young man, Angel, who was confronted by a past antagonist from a rival gang while on a date at the movies. The antagonist picked a fight, but Angel disavowed his affiliation with his gang. When the rival continued to provoke him, Angel left to go to a different movie theater. Angel used the logic of not wanting to ruin a date night by fighting, and his girlfriend affirmed his decision, saying, “They know you ain’t no punk. They know if you want to, you can whoop his ass.” As Garot describes the situation, Angel’s “skillful interactional moves left his honor intact.” Angel may be concerned with maintaining his reputation, but in these circumstances, he was unwilling to escalate conflicts using violence or the threat of it. Other young people may be respected even though they stick to their own business and do not present a tough identity. The status tournament is not the only way of winning respect or succeeding, and it does not describe a simple binary in which one is clearly in or out.

In summary, the status tournament theory allows us to imagine a diverse group of participants while capturing the insights of the tournament model. It allows us to envision different competitors, from people trying to rise in the status hierarchy to picked-on kids who just want to stop being a victim. Finally, it clarifies that violence substitution may arise both from new competitors entering the tournament and from current competitors intensifying their efforts.

D. Disruption: Gang Recruitment and Shifting Gang Identities

When imprisoned gun carriers are gang members or gang leaders, their removal may cause new violent crime in a variety of ways. Robert Vargas describes the need for theories that capture the consequences of gang-member imprisonment, such as gang wars over territory when a newly leaderless gang is too disorganized to defend its turf. The examples below show these processes in action.

Over time, gangs fade away and new gangs form. This process is accelerated when a gang loses strength because its members are in prison. Consider this account from Rob, a sixteen-year-old gang member in Los Angeles:

There was the Rippers [old gang’s name], but so many of their members went to jail that there really wasn’t enough leadership people around. So a number of people decided to start a new gang. So then we went around the area to check who wanted to be in the gang. We only checked out those we really wanted. It was like pro football scouts. . . .

Notice Rob’s description of the motivations for creating a new gang: because the existing gang had diminished in numbers, Rob and his friends felt it was possible to recruit a new gang in the same area. He may be boasting about his stature and abilities as a talent-seeker and recruiter,

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111 Id.
112 Id. at 141–142.
113 See generally ROBERT VARGAS, WOUNDED CITY (2016).
but there is no reason to doubt that he really was motivated by the imprisonment of many of the members of the old neighborhood gang.

Additionally, the displacement of a gang or gang leader may cause new conflict between other gangs. Consider this account from Juliana, a resident of the Little Village neighborhood in Chicago, describing the effects of the gang violence spurred by the arrest of a local gang leader:

Yeah, after they arrested the chief [Rudy Cantu, leader of the 22 Boys], Latin Kings started coming from the other side to fight these guys [the Satan Disciples]. Thankfully when the shooting took place here on the corner my house didn’t get hit, but now I don’t let my kids out the house anymore.\(^{115}\)

Juliana believed that the increase in violence between neighboring gangs was attributable to the disruption in local gang leadership.

Evidence on violence networks suggests that replacement and substitution will occur as gang members are incarcerated and killed. A person’s risk of being a perpetrator or victim of homicide is highly dependent on his or her position in a network.\(^{116}\) Papachristos writes, “... the observed patterns of murderous interactions are rather stable over time, even though individual gang members (most notably the victim) come and go.”\(^{117}\) If substitutes come to fill gaps when gang members are murdered, we should expect similar substitutions when gang members are incarcerated.

Gangs may test the qualities of new recruits, who must be willing to put their bodies on the line for other gang members, but also must use discretion in exercising force. One gang leader described how this evaluation process led him to deny full membership to a recruit: “There’s lots of things we liked about Rider . . . but he’s just too crazy. You just couldn’t tell what he’d do. If we kept him, he’d have the police on us all the time. He just had to go.”\(^{118}\) The gang leader had tested the recruit’s ability to use violence effectively and found him too unreliable to become a regular member of the gang.

Sentence enhancements may increase the rate of gang replacement. Albert J. Reiss, Jr. suggests that longer sentences may increase the likelihood that gang members will seek replacements: if the gang expects that the imprisoned member will be gone for a long time, they will be more eager to find a replacement.\(^{119}\) Greater substitution rates may lead to a net increase in gang-involved individuals; consider that the imprisoned member may rejoin the gang upon reentry.

Fighting can be used as an initiation ritual in gangs, from jumping in to staged fights.\(^{120}\)

\(^{115}\) Vargas, supra note 113, at 160.


\(^{117}\) Id. at 100.


\(^{120}\) See James Densely, Street Gang Recruitment: Signaling, Screening, & Selection, 59 SOC. PROBS. 301, 311 (2012) (“During the courtship period . . . gang members will invariably talk with prospective members about ‘backing them’ in a tough situation or fight.”).
prospective member may be required to commit a crime in the presence of gang members.121 These crimes may lead to fatal violence. Sociologist Jack Katz writes, “We know that proving whether one is in the gang or not is often a motivating factor in such characteristic forms of gang violence as drive-by shootings.”122 Micheail Ward, the young man who shot and killed Hadiya Pendleton, said in an interrogation that he only shot Pendleton because he was under pressure from an older, higher-ranking gang member who threatened to kill him if he didn’t pull the trigger.123

Gangs are concerned with recruiting the right people. Above, Rob described the need to “scout” for members, who should be tough and intelligent. This matches Anderson’s account of the need for a loyal group in *Code of the Street*: “Part of what protects a person is both how many people can be counted on to avenge his honor if he is rolled on in a fight and who these defenders are—that is, what their status on the street is.”124 Gang leaders must sift through a number of potential recruits to determine who will be a good fit.125 If a gang’s numbers dwindle, it will need to recruit new members to remain powerful.

Gang member imprisonment may increase violence in other ways. New gang members, who must prove that they can use violence when needed, may be less skilled at pushing conflict to the brink without getting hurt or hurting others. Older gang members may be more skilled at avoiding unnecessary conflict. Additionally, removal of a high-status gang member may spur internal competition, resulting in the gang splintering into multiple factions or causing violence between gang members.126

Studying Chicago’s Little Village neighborhood, Robert Vargas found that the arrest of a gang leader led to a short-term spike in violence. While violence levels eventually regressed to the pre-arrest levels, the increase was statistically significant in the month following the arrest.127 Describing the effect, he wrote, “an intervention aimed at dismantling a drug cartel could have unintended adverse effects by, for example, sparking violent competition among rival drug cartels over the market share of the cartel dismantled by law enforcement.”128 His theory focuses on how gangs respond to the removal of a neighboring gang’s leader.

Vargas’s theory suggests that violence substitution is most likely to occur when there are adjacent gangs that might claim the turf of the newly leaderless gang.129 Larger gangs are more likely to act aggressively and engage in turf-claiming.130 Through interviews, Vargas found that

121 Id. at 312.
125 Densely, supra note 120, at 311.
129 Id. at 147.
130 Id.
neighborhood residents attributed the spike in violence to the removal of the neighborhood gang’s leader.\textsuperscript{131} Vargas also noted the presence of signs of aggression from the neighboring Latin Kings gang, including spraying graffiti with Latin Kings iconography deep in the smaller gang’s territory.\textsuperscript{132} These findings mirror an observation from Murder by Structure that gangs with more turf overlap are more likely to murder one another’s members.\textsuperscript{133}

None of the above suggests that gangs should not be disrupted. However, there are many reasons to doubt that increased incarceration will mechanically result in reduced violence. There are too many potential counter-factors to take such an impact for granted.

\textit{E. The Criminogenic Effects of Imprisonment}

It is well documented that incarceration deprives families of resources,\textsuperscript{134} increases behavioral problems among children of incarcerated parents (and presumably harms them in the longer term),\textsuperscript{135} and marks the former prisoner as less valuable in economic and social terms, decreasing their prospects for employment and stability.\textsuperscript{136} Studies using time lag analysis to estimate the longer-term impact of incarceration on crime suggest that short-term reductions in crime may be balanced or outweighed over time. These individual, family, and community-level impacts on violent crime must be considered to give a full reckoning of the effects of incarceration.

First, the costs of incarceration weigh heavily on families and may exacerbate conditions associated with crime. A 14-state survey of the impact of incarceration on families found that two in three family members had difficulty meeting basic needs because of their loved one’s incarceration, and almost 20\% could not afford housing due to the resultant loss in income.\textsuperscript{137} These costs include prison visits, phone calls, commissary money, and criminal legal debt. A 1998 study of women visiting male prisoners found that the average monthly cost of visits, phone calls, and mailing packages was $292.\textsuperscript{138} In addition to the harms to families, this resource-drain decreases the financial capabilities of neighborhoods and communities. The costs of incarceration to families reduce available income and greatly increase the stresses of providing for a family, the same kinds of pressure associated with higher rates of crime.\textsuperscript{139}

\textsuperscript{131} Id. at 158.
\textsuperscript{132} Id. at 159.
\textsuperscript{133} Andrew Papachristos, Murder by Structure: Dominance Relations and the Social Structure of Gang Homicide, 115 AM. J. SOC. 74, 116 (2009).
\textsuperscript{135} Sara Wakefield & Christopher Wildeman, Mass Imprisonment and Racial Disparities in Childhood Behavioral Problems, 10 CRIMINOLOGY & PUBLIC POLICY 793, 799 (2011).
\textsuperscript{137} The True Cost of Incarceration, supra note 134, at 7.
\textsuperscript{138} Olga Grinstead et al., The Financial Cost of Maintaining Relationships with Incarcerated African American Men: A Survey of Women Prison Visitors, 6 J. AFR.-AM. MEN 59, 64 (2001). Note that because this survey was based on on-site interviews with visitors, it may have oversampled women who regularly visit (and, accordingly, spend more money as a result of their loved one’s imprisonment). Nevertheless, the costs are substantial.
\textsuperscript{139} Section IV, below, reviews research tying poverty and family composition to violent crime.
Second, the negative effects of parental incarceration on children may drive criminogenic social conditions over time. Imprisoned men are as likely to have children as men who are not imprisoned.\textsuperscript{140} And parental imprisonment is increasingly common for children: 25.1\% of black children and 3.6\% of white children born in 1990 had experienced paternal incarceration by age 14, compared to 13.8\% of black children and 2.2\% of white children born in 1978.\textsuperscript{141} Family imprisonment weakens ties between parents and children and is associated with increased behavioral problems in children. Specifically, Wakefield and Wildeman find that paternal incarceration is associated with substantial and statistically significant increases in a range of behavioral problems, including aggression (a more common response among young boys) and internalizing problems (a more common response among young girls).\textsuperscript{142} These harms are not limited to childhood, but extend throughout children’s lives. Wildeman and Wakefield summarize the impact: “The resulting harm is likely to include several other critical domains of adjustment—school success, occupational attainment, and family formation, to name a few—because childhood mental health and behavioral problems tend to accumulate and spread over time.”\textsuperscript{143} In addition to the individualized harms, these effects exacerbate societal inequities between white and black families, due to high rates of parental imprisonment among black children.\textsuperscript{144}

Third, imprisonment marks a person and decreases their social and economic prospects after release, harming their lives and the lives of people in their networks. The impact of incarceration can be dramatic. A regression analysis of wage mobility among young men found that incarceration produced a wage penalty of seven to nineteen percent, after controlling for age, incarceration status, work experience, schooling, standardized test scores, drug use, and marital status.\textsuperscript{145} A Milwaukee experiment using a secret shopper design, sending college student “testers,” white and black, with fictitious names and resumes, to interview for entry-level, no-experience-required jobs, revealed the extent of this effect. For white applicants, the effect was large and significant: only 17\% of white testers who reported a “criminal record” were called back for an interview, compared to 34\% of white testers without a record.\textsuperscript{146} For black testers, the effect was much stronger. Only 5\% of black testers indicating a criminal record were called back, compared to 14\% of black testers without one.\textsuperscript{147} Both wages and employment prospects are substantially hampered by a criminal record. Because employment rates and income are associated with rates of violent crime,\textsuperscript{148} it can be inferred that the decreases in employment and income associated with

\begin{itemize}
  \item \textsuperscript{140} Bruce Western & Christopher Wildeman, \textit{The Black Family and Mass Incarceration}, 621 ANNALS AM. ACAD. POL. & SOC. SCI 221, 235 (2009).
  \item \textsuperscript{141} Christopher Wildeman, \textit{Parental Imprisonment, the Prison Boom, and the Concentration of Childhood Disadvantage}, 46 DEMOGRAPHY 265, 271 (2009).
  \item \textsuperscript{142} Sara Wakefield & Christopher Wildeman, \textit{Mass Imprisonment and Racial Disparities in Childhood Behavioral Problems}, 10 CRIMINOLOGY & PUBLIC POLICY 793, 799 (2011).
  \item \textsuperscript{143} \textit{Id.} at 804.
  \item \textsuperscript{144} \textit{Id.} at 803.
  \item \textsuperscript{145} Bruce Western, \textit{The Impact of Incarceration on Wage Mobility and Inequality}, 67 AM. SOC. REV. 526, 536 (2002).
  \item \textsuperscript{146} DEVAH PAGER, MARKED: RACE, CRIME, AND FINDING WORK IN AN ERA OF MASS INCARCERATION 67 (2007).
  \item \textsuperscript{147} \textit{Id.} at 69–70.
  \item \textsuperscript{148} See, e.g., Steven D Levitt, \textit{The Changing Relationship Between Income and Crime Victimization}, ECONOMIC POLICY REVIEW – FEDERAL RESERVE BANK OF NEW YORK 87, 88 (Sept. 1999); Kenneth C. Land et al.,
\end{itemize}
incarceration will feed back into higher crime rates as incarcerated persons return to their communities.

Even if incapacitation provides an immediate benefit, the long-term effects of incarceration may equal or outweigh any reduction in violence. A recent study employing a five-year time lag analysis accounting for both incarceration and reentry rates found that the incapacitation effects of imprisonment were completely offset by the crime-increasing effects of reentry. Higher rates of incarceration and reentry were correlated with net increases in violent crime over time. If the criminogenic effects of incarceration grow over time, most studies of imprisonment, which use short time frames, will fail to capture the damage. Indeed, the criminogenic effects of past incarceration on an individual’s reentry do seem to be cumulative over time. As the authors noted, these findings do not unambiguously support the conclusion that incarceration has a net effect of increasing crime. The reentry crime bump could be attributed to the fact that previously incarcerated individuals have been released. In other words, one viable reading of the data is that incapacitation is effective, and the crime-increasing qualities of prisoner reentry occur because prisoners are no longer being incapacitated. However, the authors argue that because they have controlled for variations in the overall incarceration rate, their findings on the criminogenic effect of reentry should remain valid.

F. A Very Brief Reflection on the Politics of Ludwig’s Work

Ultimately, Ludwig’s analysis of the costs and benefits of HB2265 missed many potentially confounding factors. Like Mayor Emanuel and Superintendent McCarthy, Ludwig focused on the individual behavior of gun carriers, not group-level, community-level, or city-level drivers of violence. Ludwig’s work is influenced by politics: he is able to focus exclusively on the individual, gun carrier level of analysis because that is the way political leaders frame the issue. He is not concerned that the bill’s supporters would hesitate to use his work because it does not address the many pertinent structural impacts of the proposed policy. Ludwig’s work also influences politics: his promise of enormous benefits to the city provides Chicago’s political leaders with the capital to sell the new policy as a “sure thing” and reinforces their understanding of the problem. Ludwig’s memorandum and the political push in support of HB2265 are mutually reinforcing.

III. BRIEF LITERATURE REVIEW

The next section analyzes Chicago neighborhood-level violence and gun sentencing data. The goal is to examine whether Ludwig’s hypothesis that higher gun sentences will lead to lower violent crime rates is supported by the data. This section briefly reviews some of the research relevant to this investigation.


150 Id. at 1009.

151 Id.

152 Id. at 1012.

153 Id.

https://scholarship.law.upenn.edu/jlasc/vol23/iss2/1
A. Empirical Data on the Link between Crime and Punishment

The association between changes in violent crime rates and the length of criminal sentences is not clear, as the studies cited below demonstrate. The “crime control” hypothesis predicts that prosecutors and judges will respond to higher levels of community crime by imposing harsher sentences.\textsuperscript{154} However, several studies have undermined the crime control hypothesis. One study found that higher county-level violent crime rates did not increase the average length of criminal sentences.\textsuperscript{155} A second study found that only the drug arrest rate, not the violent or property crime rate, was significant in accounting for county-level variation in awarding lenient sentencing dispositions.\textsuperscript{156} Finally, at least one study suggests that judges respond to higher rates of violence with leniency: A 2005 study comparing courts across Pennsylvania found that courts in counties with higher rates of violent crime cases were more likely to grant downward departures from sentencing guidelines for violent crimes (resulting in shorter sentences) than judges in counties with caseloads that had a smaller percentage of violent crime cases.\textsuperscript{157}

A few studies have focused on whether changes in a locality’s crime rate (as opposed to its absolute crime rate) influence sentence lengths. Researchers have not identified a clear connection. A recent study of county-level sentencing outcomes in South Carolina found no statistically significant effect of changes in crime rates on the decision to incarcerate or length of sentence.\textsuperscript{158} Additionally, a study of Pennsylvania county-level sentencing found no evidence that increases in violent crime rates were associated with longer prison sentences.\textsuperscript{159}

Studies of departures from sentencing guidelines have also examined how social-contextual features of courts affect sentencing, generally analyzing differences between counties in the same state, not between neighborhoods in the same city. Studies of county-level difference have found that departures from sentencing guidelines are affected by the percent Republican, age composition, and urban status of a court’s surrounding community;\textsuperscript{160} that larger courts are more likely to depart downward from sentencing guidelines (imposing shorter sentences);\textsuperscript{161} and that court caseload and the racial composition of the community within a court’s jurisdiction affect sentencing.\textsuperscript{162} In particular, researchers consistently find an inverse relationship between case

\textsuperscript{155} Id. at 725.
\textsuperscript{156} Stephanie Bontrager et al., Race, Ethnicity, Threat and the Labeling of Convicted Felons, 43 CRIMINOLOGY 589, 608 (2005).
\textsuperscript{162} Johnson, supra note 157, at 783.
volume measured by the court’s community size and average sentence length.\textsuperscript{163}

The violent crime rate is not generally found to impact the average length of criminal sentences. In one study, other contextual factors like the racial demographics and property and drug crime rates were closely associated with county-level differences in sentencing.\textsuperscript{164} Counties with more prosecutions for property and drug crimes generally imposed shorter sentences.\textsuperscript{165} The causal mechanism between crime rates and sentence lengths, to the extent such a link exists, has not been established.

\textbf{B. How Judges and Prosecutors Respond to Neighborhood Violence}

Cook County judges and prosecutors play a major role in setting sentence lengths for gun possession. Prosecutors often define their main role as creating public safety, and their main tool to do this is criminal prosecution.\textsuperscript{166} Prosecutors are the most influential actors in determining sentence lengths.\textsuperscript{167} Across the US, around 90-95 percent of criminal cases are resolved by plea bargains.\textsuperscript{168} With prosecutors wielding great leverage and almost all cases resolved through plea bargaining, a prosecutor’s sense of a “fair deal” can greatly affect sentencing.

The high volume of criminal cases in Cook County makes it difficult for prosecutors to consider neighborhood-level circumstances. Around 200 prosecutors handle felony cases at “26th and California,” the Central Criminal Courts Building.\textsuperscript{169} These prosecutors handle hundreds of cases per year, and many describe struggling to keep up with their caseloads.\textsuperscript{170} The same is true of criminal division felony judges, who hear around 800 new cases per year.\textsuperscript{171} For context, a 1993


\textsuperscript{164} Id. at 159.

\textsuperscript{165} Id. at 162.

\textsuperscript{166} See, e.g., Office Priorities, Cook County State’s Attorney, https://www.cookcountystatesattorney.org/about/policy-priorities (last visited July 12, 2017) (“At the center of State’s Attorney’s Kim Foxx’s vision for a revitalized State’s Attorney’s Office is a core belief: That the job of the Office of the Cook County State’s Attorney is to promote public safety. . . .”).

\textsuperscript{167} Stephanos Bibas, Prosecutorial Regulation Versus Prosecutorial Accountability, 157 U. PA. L. REV. 959, 969–75 (2009) (describing the information gap between prosecutors and judges, which empowers prosecutors to take the lead in determining the outcome of cases); NICOLE GONZALEZ VAN CLEVE, CROOK COUNTY 108–111 (2016) (giving examples of public defenders acknowledging their roles as the weaker and less influential actors in the plea bargaining process and seeking leverage from a position of weakness); Jed S. Rakoff, Why Innocent People Plead Guilty, N.Y. REVIEW BOOKS (Nov. 20, 2014), http://www.nybooks.com/articles/2014/11/20/why-innocent-people-plead-guilty/?insrc=whe (“. . . in both the state and federal systems, the power to determine the terms of the plea bargain is, as a practical matter, lodged largely in the prosecutor, with the defense counsel having little say and the judge even less.”) [https://perma.cc/5FPF-R2K2].


\textsuperscript{169} Coyne, supra note 167, at 35.

\textsuperscript{170} Id. at 69.

\textsuperscript{171} Id. at 26.
study performed for the Criminal Division of the Circuit Court suggested that the court would need 65 judges—nearly twice as many as are currently employed—to adequately handle the annual caseload of 28,000 felony cases.\footnote{172}

Other evidence supports the theory that prosecutors and judges do not consider neighborhood-level factors like violent crime rates in imposing criminal sentences. Nicole Gonzalez Van Cleve has studied the Cook County criminal legal system in extensive detail, conducting 104 interviews with Cook County judges, prosecutors, and public defenders and coordinating more than 1,000 hours of court-watching to build a large and unique dataset describing the processes of Cook County courts.\footnote{173} Anecdotally, the personal predilections of judges appear to affect the sentences given. Van Cleve describes a judge who, because of her personal distaste for residential burglaries, refused to approve a non-carceral plea bargain for a man accused of possessing marijuana because he had been convicted of residential burglary twelve years prior.\footnote{174} Another judge reluctantly approved a light sentence for an older man dying of HIV and tuberculosis, but told the public defender that his next client was going to “get it,” making clear that deviations from the “going rate” for plea bargains were a limited resource.\footnote{175} There is little in these accounts to suggest that judges are responding to fine-grained differences in individual cases, let alone neighborhood-level trends.

In a few cases, judges and prosecutors may pay attention to where a defendant lives and works. Van Cleve recounts a black defendant who lived in the city but worked in Winnetka, a white, rich, suburban neighborhood. The prosecutor and judge were very attentive to this fact, which Van Cleve attributes to their racialized concerns about a “bad guy” spending time in a well-off neighborhood.\footnote{176} But this situation is an exception to the rule, and there is little to suggest that Cook County prosecutors and judges work with a detailed understanding of neighborhood circumstances.

\section*{IV. AN EMPIRICAL TEST}

This empirical section tests Ludwig’s hypothesis that longer gun sentences are correlated with reduced violent crime. Using Chicago neighborhood-level data on violent crime rates and sentence lengths for illegal gun possession, I will adopt and test Ludwig’s hypothesis:

\begin{align*}
\text{H}_0: \text{As a result of longer sentences for gun possession, violence rates will remain the same or increase.} \\
\text{H}_A: \text{As a result of longer sentences for gun possession, violence rates will decrease.}
\end{align*}

This analysis will not, and cannot, prove that higher gun sentences do, or do not, affect crime. This work is analogous to a study of robberies and arrests in five Oklahoma City

\begin{itemize}
\item \footnote{172} Id. at 30.
\item \footnote{173} NICOLE GONZALEZ VAN CLEVE, CROOK COUNTY 93 (2016).
\item \footnote{174} Id. at 120.
\item \footnote{175} Id. at 113.
\item \footnote{176} Id. at 116–18.
\end{itemize}
neighborhoods, which found no evidence to suggest that increased arrests deter future robberies.\textsuperscript{177} The researchers suggested that there might still be a deterrent effect of a higher arrest rate, but that such an effect might be impossible to ascertain if the deterrence has reached an equilibrium.\textsuperscript{178} In that study, there was no good way to decide whether the results suggested no deterrence or consistent deterrence. Similarly, in this analysis, a failure to find a link between sentence lengths and crime rates would not “prove” that higher gun sentences do not affect crime. As the authors of the Oklahoma City study note, an ideal analysis would compare neighborhoods at the same time and across different time periods to attempt to assess whether neighborhoods really remained at “equilibrium” or if changes in punishment tend to precede changes in crime.\textsuperscript{179} But there is not enough data to conduct a conclusive analysis. Instead, the below analysis adds a new piece of information to help understand whether the tenuously-supported connections between punishment severity and crime truly exist.

As later sections will discuss, this analysis relies on a limited data set with a small sample size. These and other limitations will make it more difficult to be confident that our results are meaningful. However, the central claim of mandatory-minimum proponents is that people who carry illegal guns are uniquely dangerous, making their incarceration extremely beneficial from a public safety standpoint. The below pages test that claim and provide at least one additional data point towards resolving it.

\textit{A. Selecting Variables}

Many past studies have considered correlates of violent crime, and I will include the most frequently used variables from those studies, where available. Additionally, because my analysis focuses on comparisons between neighborhoods, whereas most research on this topic makes comparisons between cities, I will omit some variables that do not make sense in a neighborhood-comparison context. Finally, I will prioritize the use of variables that are captured by the most accessible ZIP code-level data set, the 2011 American Community Survey 5-year estimates.

The following table presents a summary of control variables considered for the regression analysis, focusing on variables that are frequently used in violent crime research:

\begin{table}
\centering
\begin{tabular}{|c|c|}
\hline
Variable & Description \\
\hline
Age & Age of offender \\
\hline
Gender & Gender of offender \\
\hline
Race & Race of offender \\
\hline
Education & Education level of offender \\
\hline
Employment & Employment status of offender \\
\hline
Mental Health & History of mental health issues \\
\hline
Drug Use & History of drug use \\
\hline
\end{tabular}
\end{table}

\footnote{177} Robert J. Bursik, Jr., et al., \textit{The Effect of Longitudinal Arrest Patterns on the Development of Robbery Trends at the Neighborhood Level}, 28 CRIMINOLOGY 431 (1990).
\footnote{178} Id. at 446.
\footnote{179} Id.
Studies of violent crime use many socio-demographic variables to control for correlates of the crime rate. The choice of variables is not always accompanied by a robust explanation of why the variables chosen are relevant, although a number of variables are consistently used. For example, a recent study analyzing the effects of incarceration on crime controlled for percent unemployed, income, percent high school graduates, percent college graduates, percent age 18-24, percent age 25-44, percent divorced, percent female-headed households, percent white, and percent metro. The authors’ explanation of those choices was that they are, “consistent with the standard empirical model used in the crime-incarceration literature.” But although some of these variables may be somewhat frequently used, there is no “standard set” of control variables to deploy. As Moody and Marvell note, “...from a general perusal of the economic research literature, it is clear that (i) researchers do not make full use of the potentially important control variables available, and (ii) researchers have no evident methodology for selecting controls.” On a larger scale, no consensus has emerged as to the cause of the large declines in crime in the past few decades.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Included?</th>
<th>Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean illegal gun possession sentence</td>
<td>Yes</td>
<td>Dependent variable of interest</td>
</tr>
<tr>
<td>% Black</td>
<td>Yes</td>
<td>Frequently found significant</td>
</tr>
<tr>
<td>Residential stability</td>
<td>Yes</td>
<td>Frequently found significant</td>
</tr>
<tr>
<td>% Households with income below poverty line</td>
<td>Yes</td>
<td>Frequently used</td>
</tr>
<tr>
<td>% Female-headed households</td>
<td>Yes</td>
<td>Frequently used</td>
</tr>
<tr>
<td>% Age 15-29</td>
<td>Yes</td>
<td>Frequently used</td>
</tr>
<tr>
<td>% Unemployed</td>
<td>No</td>
<td>Found to be weakly connected (or not connected) to violent crime; likely collinear with poverty measure</td>
</tr>
<tr>
<td>% Divorced</td>
<td>No</td>
<td>Overlaps with % Female-headed households; changes in marriage patterns</td>
</tr>
<tr>
<td>Population density, population size</td>
<td>No</td>
<td>Used in city-to-city comparisons, but may not be applicable to neighborhoods</td>
</tr>
<tr>
<td>Socioeconomic inequality</td>
<td>No</td>
<td>Used in city-to-city comparisons; much harder to measure across neighborhoods</td>
</tr>
<tr>
<td>Education</td>
<td>No</td>
<td>Not as frequently used; potentially collinear with other variables</td>
</tr>
<tr>
<td>Social efficacy (e.g. trust in neighbors)</td>
<td>No</td>
<td>Difficult to measure, not readily available on neighborhood level</td>
</tr>
</tbody>
</table>


181 Id.


183 Vanessa Barker, *Explaining the Great American Crime Decline: A Review of Blumstein and Wallman*,...
A guiding principle is to limit the number of variables used to minimize the risk of false positives. The ideal balance to strike is to use those variables, and only those variables, that are theoretically linked to the violent crime rate. Over-inclusiveness can hide the relevant results: as one study of homicide rates warns: “... specification error can be induced by including irrelevant regressors, and thus risks are involved in simply ‘trying on’ whatever variables are available in standard data sources.”184 Additionally, the small sample size of neighborhoods counsels against including too many variables.

Theoretically, measures of income, segregation, and social stability should all be relevant in the analysis. Black, poor neighborhoods experience higher levels of policing,185 leading to more stops and more arrests, with possible implications for sentence lengths.186 Similarly, poor defendants and black defendants will experience discrimination at various points in the criminal legal system, worsening their outcomes.187 Certainly, the greater likelihood of not being released on bond for poor defendants increases the likelihood of incarceration, and the time they will serve.188

The above control variables were chosen because they were frequently used in violent crime research, frequently found to be correlated with violence, and fit a neighborhood-level analysis of violent crime. Percent black was chosen because it is very frequently used, measures segregation, and measures the concentration of individuals who face the most racial-social disadvantages.189 Residential stability—the percentage of families who have lived in the same


185 In early 2016, black Chicagoans experienced 71% of all police stops despite representing less than a third of the city’s population. These statistics were measured after an agreement between the ACLU and the Chicago Police Department designed to decrease racial discrimination in police stops; the disparity at the time of our analysis may have been even higher. See Arlander Keys, The Consultant’s First Semiannual Report On The Investigatory Stop and Protective Pat Down Agreement For The Period January 1, 2016 – June 30, 2016 (2017), https://www.aclu-il.org/sites/default/files/wysiwyg/the-consultants-first-semiannual-report-3-23-17.pdf [https://perma.cc/BZ63-V28R].

186 Past criminal convictions are a significant predictor of sentence outcomes for future crimes. See, e.g., Iain Pardoe & Robert R. Weidner, Sentencing Convicted Felons in the United States: A Bayesian Analysis Using Multilevel Covariates, 136 J. Stat. Plan. & Inference 1433, 1442 (2006) (finding that past carceral sentences increase the likelihood that new charges will result in a carceral sentence, though this effect varies with the unemployment rate, race, and whether the county’s geographic location).


188 Many studies have found that pretrial detention (failing to make bail) increases the likelihood of receiving a carceral sentence and the length of that sentence. See, e.g., John Clark and D. Alan Henry, The Pretrial Release Decision, 81 Judicature 76 (1997); Tracy Nobiling et al., A Tale of Two Counties: Unemployment and Sentence Severity, 15 Just. Q. 459 (1998).

household for the last five years—has been found significant under theories that invoke the role of social efficacy or social control in deterring crime. As other measures of collective efficacy are not readily available, residential stability serves as a proxy for more nuanced measures of collective efficacy.

Connections between family income and violent crime have been found in multiple studies. Income can be measured by median income or by the percentage of households below the poverty line. Lacking a good reason to prefer one to another, this analysis uses the percentage of families in poverty, both because it was used slightly more often in the studies I surveyed and because there is no need to transform the data (for example, taking the logarithm of income) so that it scales with other variables.

Family structure and “disruption” is also a frequently used variable. Although it is not always found to be significantly correlated with crime, some analyses have identified family structure as a significant determinant of neighborhood violence. I use the percentage of female-headed household to measure this factor.

Finally, the prevalence of young people is added as a control variable. People “age out” of crime, and violent crime is most prevalent among younger people; Blumstein found that arrest rates for aggravated assault were highest among 21-year-olds. Some studies have followed this insight and measured the proportion of population within certain age bands, although the bands used vary. An age range of 15-29 is used here, in part because it is the age range most closely associated with homicide.

A few frequently-used covariates are not included here. Divorce rates have been used as a control variable in violence research. But as the proportion of adults who have never married

Steffensmeier, Economic Inequality, Family Disruption, And Urban Black Violence: Cities as Units of Stratification and Social Control, 73 SOC. FORCES 729 (1994).


191 For examples of survey questions used to measure social efficacy, see Christopher R. Browning et al., The Paradox of Social Organization: Networks, Collective Efficacy, and Violent Crime in Urban Neighborhoods, 83 SOC. FORCES 503, 513–514 (2004).


193 Robert DeFina & Lance Hannon, For Incapacitation, There is No Time Like the Present: The Lagged Effects of Prisoner Reentry on Property and Violent Crime Rates, 39 SOC. SCI. RES. 1004, 1009 (2010) (finding that percentage of female-headed homes was not significantly correlated with crime).

194 Shihadeh & Steffensmeier, supra note 189, at 744.


196 Kenneth C. Land et al., Structural Covariates of Homicide Rates: Are There Any Invariances Across Time and Social Space?, 95 AM. J. SOC. 922, 926 n.9 (1990). In the regression run in Land’s paper, the specific range of ages analyzed (15-24, 15-29, 20-34, 15-29) did not substantially alter the regression results. The same should apply in the analysis conducted in this paper.
increases over time, it may be more valuable to directly consider family composition than divorce rates. Unemployment is also not used due to our specific focus on violent crime. Researchers have found that increases in unemployment are correlated with increases in property crime, but not violent crime. Some studies have even suggested that increasing unemployment is associated with decreasing violent crime rates. Income inequality is also not used here because it is more difficult to measure on a cross-neighborhood level than on a cross-city level (What is the appropriate reference group? The whole city? Nearby neighborhoods? Inequality within the neighborhood?). Additionally, some studies have found the relationship between income inequality and violent crime to be highly collinear with the relationship between overall income and violent crime, so it should be possible to account for much of this relationship by including a measure of overall income (percent households in poverty). Finally, measures of education are not used because they were infrequently used in the studies I surveyed and because they are likely collinear with the other control variables used here.

The equation associated with this regression analysis is as follows:

$$\text{Violent crime index} = \beta_0 + \beta_1(\text{mean sentence}) + \beta_2(\% \text{ Black}) + \beta_3(\text{residential stability}) + \beta_4(\% \text{ households in poverty}) + \beta_5(\% \text{ female-headed households}) + \beta_6(\% \text{ age 15-29})$$

A final task is to address endogeneity issues. A description of this problem is given by M.B. Gordon:

... if crime rates and probabilities of punishment are negatively correlated, one cannot distinguish between the hypothesis that higher probabilities of punishment cause lower crime rates or the hypothesis that higher crime rates cause lower probabilities of punishment (because of police overloading). Thus, studies that consider simultaneous (cross-sectional) data can only detect correlations.

Although Gordon’s example focuses on crime rates and policing, the same problem exists in understanding the connections between violent crime and sentence lengths. It might seem that


198 See, e.g., Ming-Jen Lin, Does Unemployment Increase Crime? Evidence from U.S. Data 1974-2000, 43 J. HUM. RESOURCES 413 (2008); Mikko Altonen et al., Examining the Generality of the Unemployment–Crime Association, 51 CRIMINOLOGY 561, 582 (2013) (“All our models indicate that the within-individual association between unemployment and crime is consistent for property crime, whereas violent crime and drunk driving are not associated with unemployment in a meaningful way. Over longer follow-up, those people who commit violent crimes and drive while drunk are certainly unemployed for much longer times than most, but they do not seem to be more likely to commit these crimes while they are registered as unemployed”).


200 Land et al., supra note 196.

rising violence would be met with longer sentences, masking the potential effect of longer sentences on violent crime rates.

There are a few reasons to believe that there is no major endogeneity problem in the proposed analysis. First, changes in crime rates have not been shown to influence criminal sentence lengths.\textsuperscript{202} Second, the extremely high felony case volume in the Cook County courts suggests that judges and prosecutors are not able to closely consider each case of illegal gun-carrying, decreasing the likelihood that variations in sentencing reflect fine-grained case differences.\textsuperscript{203} Finally, a survey of neighborhoods across Chicago finds substantial variations in gun sentences in both high and low-crime neighborhoods, contradicting the theory that higher-violence neighborhoods will tend to have higher gun sentences.

\textbf{Figure 4: Gun Sentence Lengths and Violent Crime Rates}

The above graph, which maps the 2010 violence rate of Chicago neighborhoods against average gun sentences in 2008 and 2009, shows that violence rates are essentially not connected to gun sentences.\textsuperscript{204} Every additional serious violent crime per 1,000 neighborhood residents is associated with an increase in sentence length of only 0.03 months (0.9 days). This association accounts for less than 1% of the variation in gun sentences. Chicago demonstrates what the theories described in the literature review section suggest: prosecutors and judges do not respond to local


\textsuperscript{203} See generally NICOLE GONZALEZ VAN CLEVE, CROOK COUNTY (2016).

\textsuperscript{204} Graph made using Chicago city crime and Cook County Circuit Court Clerk sentencing. Note that the graph only includes neighborhoods with 20 or more gun sentences in 2008 and 2009. See Crimes – 2010, CHICAGO DATA PORTAL, https://data.cityofchicago.org/Public-Safety/Crimes-2010/q4de-h6yq [perma.cc/5BLM-YPYL].
crime rates by imposing longer criminal sentences.

B. Data Collection

Much of the covariate data was compiled through the American Community Survey.\textsuperscript{205} But calculating the rates of violent crime and the mean length of gun sentences required a number of design decisions. The below section describes how I collected this data and identified the appropriate time frame for the analysis.

Both homicide rates and a “violence index” of violent crime, including rape, robbery, aggravated assault, and homicide, have been used to understand the connections between social factors and violence. Studies using homicide rates have found different correlates of violence than studies using violence indices.\textsuperscript{206} Homicide rates are often privileged as a measure of violence because homicide is the most consistently-reported crime.\textsuperscript{207} However, in this paper’s analysis of Chicago neighborhood violence, it would be inappropriate to use only homicide due to the small number of homicides and large number of neighborhoods analyzed. A variance of just a few homicides could create a false impression of meaningful difference. By using an index of violent crime instead, this paper smooths out some of the expected year-to-year variations in violent crime by examining a larger study set of crimes. I adopt the same index of violent crime used by Ludwig: homicide, robbery, criminal sexual assault, aggravated assault, and aggravated battery.\textsuperscript{208} The index is measured at an annual rate per 1,000 residents.

Calculating the average length of gun sentences is more difficult. The Chicago Justice Project obtained data for all Cook County felony convictions between 2005 and 2009 from the Cook County Circuit Court.\textsuperscript{209} This data includes address and zip-code-level location data, sentence categories (probation, boot camp, prison, etc.,) and sentence lengths. Although Ludwig primarily focused on aggravated unlawful use of a weapon cases,\textsuperscript{210} a fuller picture of firearm conviction-related incapacitation would include charges for unlawful use of a weapon (firearm) by a felon.\textsuperscript{211} Accordingly, this analysis considers both categories of convictions.

The mean sentence, not the median, is most relevant to this analysis. The premise of Ludwig’s incapacitation hypothesis is that the more months a person is held in jail, the fewer opportunities they will have to commit crimes in their community. Using the median sentence to understand neighborhood-level differences would not make sense, since the goal is to get at the number of total incapacitation-months. Even if every ZIP code had a median sentence of 24 months, if some areas have a mean sentence of 30 months and others a mean sentence of 24 months, there should be more incapacitation and lower levels of violent crime in the areas with mean sentences.
of 30 months. However, the raw mean is also not an appropriate measure of incapacitation. In 2008, one defendant was sentenced on two counts of Unlawful Use of a Weapon by a Felon and was sentenced to 31 years in prison.212 This person will be in prison for a long time, but it could be misleading to include his full sentence when approximating the total impact of incapacitation for a given sample period.

A “cap” on sentence lengths can address the problem of outlier sentences. This analysis uses sentence data from 2008 and 2009 to measure violence rates in 2010. The key to setting the sentence cap is to realize that almost all individuals convicted of firearms offenses serve only 50% of the nominal sentence.213 Accordingly, the cap for the sentence length of criminal convictions in 2008 should be 72 months (36 months served) and the cap for the sentence length of criminal convictions in 2009 should be 48 months (24 months served). This cap represents the maximum length of incapacitation that could affect 2010 crime rates; a person convicted on January 1, 2008 and given a 72-month sentence would be imprisoned through the end of 2010, as would a person given a 48-month sentence on January 1, 2009. Because of credit for time served, this cap is not airtight; the difference between a 72 and 96-month sentence might be meaningful if a person has been given 12 months of credit for time served when they are sentenced. Still, this cap allows for a reasonable approximation of the actual incapacitation effect without introducing specific controls that would require tracking every convicted person individually, making the model unduly complicated.

The following conversions are used to calculate sentences other than imprisonment. Probation, conditional discharge and supervision sentences are coded as having a length of “0.” This is because under each of these sentences, individuals are immediately released into their communities.214 Additionally, where time served equaled or exceeded a prison sentence, the sentence is coded as “probation” or “time served,” and sentence length given as “0,” because there is no forward-looking incarceration imposed. Sentence length is also given as “0” for community service and home confinement. Boot camp, a 120-day program in which convicted individuals live in a military-style camp, is coded as having a length of 10 months. The average length of incarceration for these individuals was five months, including an average one-month wait period before starting the program and four months in the program.215 For parity with prison sentences, I double the calculated length to 10 months (because statutory “good time” translates a 10-month jail sentence into approximately five months imprisonment).216

Using this methodology produces the following range of average (mean) prison sentences

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212 The defendant’s case number is: 2008CR1871902 in supra note 209.
213 An October 2010 report on sentencing in Illinois stated: “... sentences imposed in court on all but murder, some sex offenses and a few other serious crimes are typically reduced in half by ‘statutory’ or ‘day-for-day’ good time. This credit is awarded up front and in advance of time being served. It can be taken away as a disciplinary measure, but seldom is.” Malcolm C. Young, Setting the Record Straight: the Truth About “Early Release” From Illinois Prisons, BLUHM LEGAL CLINIC – NORTHWESTERN UNIVERSITY SCHOOL OF LAW 4 (Oct. 27, 2010).
214 For an explanation of each sentencing outcome, see Probation for Adults, ILL. CIRCUIT COURT OF COOK COUNTY, http://www.cookcountycourt.org/ABOUTTHECOURT/OfficeoftheChiefJudge/ProbationDepartments/ProbationforAdults.aspx [perma.cc/U28N-V5SU].
216 Young, supra note 213.
for UUW by a felon and aggravated UUW across our sample neighborhoods:

**Figure 5: Convictions and Average Sentence by Neighborhood**

<table>
<thead>
<tr>
<th>Zip Code</th>
<th>Neighborhoods</th>
<th># Convictions</th>
<th>Average Sentence (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60628</td>
<td>Pullman, Roseland</td>
<td>269</td>
<td>18.9</td>
</tr>
<tr>
<td>60636</td>
<td>West Englewood</td>
<td>191</td>
<td>17.7</td>
</tr>
<tr>
<td>60620</td>
<td>Auburn Gresham</td>
<td>173</td>
<td>21.0</td>
</tr>
<tr>
<td>60621</td>
<td>Englewood</td>
<td>169</td>
<td>19.6</td>
</tr>
<tr>
<td>60617</td>
<td>South Chicago, East Side</td>
<td>165</td>
<td>16.6</td>
</tr>
<tr>
<td>60619</td>
<td>Chatham, Avalon Park</td>
<td>164</td>
<td>20.9</td>
</tr>
<tr>
<td>60609</td>
<td>Armour Square, Bridgeport</td>
<td>134</td>
<td>20.6</td>
</tr>
<tr>
<td>60649</td>
<td>South Shore</td>
<td>132</td>
<td>20.0</td>
</tr>
<tr>
<td>60651</td>
<td>Austin, Humboldt Park</td>
<td>128</td>
<td>27.4</td>
</tr>
<tr>
<td>60629</td>
<td>Gage Park, West Lawn</td>
<td>125</td>
<td>18.8</td>
</tr>
<tr>
<td>60637</td>
<td>Hyde Park, Woodlawn</td>
<td>120</td>
<td>20.3</td>
</tr>
<tr>
<td>60644</td>
<td>Austin</td>
<td>107</td>
<td>26.9</td>
</tr>
<tr>
<td>60623</td>
<td>North Lawndale, South Lawndale</td>
<td>100</td>
<td>22.3</td>
</tr>
<tr>
<td>60624</td>
<td>West Garfield Park, East Garfield Park</td>
<td>99</td>
<td>26.5</td>
</tr>
<tr>
<td>60643</td>
<td>Beverly, Morgan Park</td>
<td>87</td>
<td>13.8</td>
</tr>
<tr>
<td>60639</td>
<td>Austin, Belmont Cragin</td>
<td>78</td>
<td>22.3</td>
</tr>
<tr>
<td>60608</td>
<td>Bridgeport, Pilsen</td>
<td>59</td>
<td>17.8</td>
</tr>
<tr>
<td>60615</td>
<td>Hyde Park, Kenwood</td>
<td>55</td>
<td>23.7</td>
</tr>
<tr>
<td>60632</td>
<td>Archer Heights, Brighton Park</td>
<td>55</td>
<td>15.1</td>
</tr>
<tr>
<td>60612</td>
<td>Near West Side</td>
<td>54</td>
<td>25.6</td>
</tr>
<tr>
<td>60653</td>
<td>Douglas, Grand Boulevard</td>
<td>54</td>
<td>16.3</td>
</tr>
<tr>
<td>60647</td>
<td>Hermosa, Humboldt Park</td>
<td>36</td>
<td>27.9</td>
</tr>
<tr>
<td>60622</td>
<td>Humboldt Park, Logan Square</td>
<td>33</td>
<td>26.7</td>
</tr>
<tr>
<td>60652</td>
<td>Ashburn</td>
<td>28</td>
<td>17.1</td>
</tr>
<tr>
<td>60618</td>
<td>Avondale, Irving Park</td>
<td>23</td>
<td>31.0</td>
</tr>
<tr>
<td>60641</td>
<td>Belmont Cragin, Irving Park</td>
<td>22</td>
<td>21.5</td>
</tr>
<tr>
<td><strong>Sum/Average</strong></td>
<td></td>
<td><strong>2660</strong></td>
<td><strong>20.7 (average of all sentences)</strong></td>
</tr>
</tbody>
</table>
To finalize the model it is necessary to define a time lag between the moment of sentencing and the time at which violent crime rates are calculated. To evaluate the effects of incapacitation, a model would ideally account for the specific start and end dates of incarceration to calculate how many people convicted of illegal gun possession are “off the streets.” This delay is not easily measured. As one meta-analysis states: “the lag to be used is not evident and depends on the type of variable.”  

The average length of a gun sentence among the neighborhoods in our analysis is 20.7 months, which translates to about 10.3 months served in jail or prison. But sentences are bimodally distributed; in 2008 and 2009, most sentences either involved no forward-looking incarceration or were for lengths of 36 months or more:

**Figure 6: Distribution of Gun Possession Sentences**

The large majority of individuals who are convicted of illegal gun-carrying either receive no forward-looking carceral sentences or are given sentences of 36 months or greater. As explained above, incarcerated individuals serve only about 50% of the nominal length of their sentence. Accordingly, most convicted individuals who are incarcerated (i.e., don’t receive probation, time served, or community service) will be imprisoned for 18-24 months or longer. This validates the decision to use 2008 and 2009 sentencing data and 2010 violent crime rates. Many people sentenced for gun possession in 2008 and 2009 remain imprisoned for part or all of 2010. The mean sentence is a reasonable proxy for the extent of this imprisonment and the corresponding degree of incapacitation one would expect under Ludwig’s theory.

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218 *Id.*
C. Results

It is now possible to conduct a multiple regression analysis and test for the significance of the relationship between gun sentences and violent crime. The following table of summary statistics presents the data used in this regression:

<table>
<thead>
<tr>
<th>ZIP Code</th>
<th>2010 crime index</th>
<th>Avg gun sent. (months)</th>
<th>% Black</th>
<th>% Recent Move(^{219})</th>
<th>% Below Poverty</th>
<th>% Female-headed</th>
<th>% Age 15-29</th>
</tr>
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<td>50.9%</td>
<td>35.8%</td>
<td>31.0%</td>
<td>19.4%</td>
</tr>
</tbody>
</table>

\(^{219}\) Defined as having moved in 2005 or later – a measure of housing stability.
A multiple regression analysis of the above data, with the violent crime index as the dependent variable, delivers the following results:

**Figure 8: Regression Results**

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>(Standard error)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-16.08 (8.87)</td>
<td>0.09</td>
</tr>
<tr>
<td>Mean gun sentence</td>
<td>0.48 (0.25)</td>
<td>0.08</td>
</tr>
<tr>
<td>Percent Black</td>
<td>0.14 (0.04)</td>
<td>0.00</td>
</tr>
<tr>
<td>Residential stability (Moved 2005 or later)</td>
<td>-0.20 (0.21)</td>
<td>0.35</td>
</tr>
<tr>
<td>Percent poverty</td>
<td>0.46 (0.30)</td>
<td>0.14</td>
</tr>
<tr>
<td>Percent female-headed households</td>
<td>0.12 (0.33)</td>
<td>0.72</td>
</tr>
<tr>
<td>Percent age 15-29</td>
<td>0.37 (0.34)</td>
<td>0.29</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>Number Observations</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>ANOVA significance F</td>
<td>6.54E-09</td>
<td></td>
</tr>
</tbody>
</table>

The explanatory power of the regression is very high, predicting 91% of variation in serious violent crime rates among ZIP codes. The percentage of black residents is significantly correlated with violence at a 99% significance level, and the mean gun sentence is significantly correlated with violence at a 90% significance level. Mean gun sentences are positively correlated with violence, meaning that higher gun sentences are correlated with higher levels of violent crime.

Each increase of one percentage point black population in a ZIP code is associated with an additional 0.14 serious violent crimes per 1,000 residents per year, while each increase of one month in the mean gun sentence is associated with an additional 0.48 serious violent crimes per 1,000 residents per year. Although the coefficient of the mean gun sentence is higher, the range of variation between the two values is very different. The percentage of black residents in our zip codes ranges from a low of 1.9% to a high of 98.0%, while average gun sentences range from 13.8
months to 31.0 months.

The variables in this analysis are not highly correlated, as shown below. The exception is that the percentage of female-headed households is highly correlated with both the percentage of black residents and the percentage of residents living in poverty. In general, these levels of collinearity provide some assurance that collinearity problems are not disrupting the findings.

**Figure 9: Correlation Analysis**

<table>
<thead>
<tr>
<th></th>
<th>Mean gun sentence</th>
<th>Percent Black</th>
<th>Residential stability</th>
<th>Percent poverty</th>
<th>Percent female-headed</th>
<th>Percent age 15-29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean gun sentence</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Black</td>
<td>-0.19</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential stability</td>
<td>0.59</td>
<td>-0.27</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent poverty</td>
<td>0.04</td>
<td>0.58</td>
<td>0.25</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent female-headed</td>
<td>-0.13</td>
<td>0.83</td>
<td>-0.30</td>
<td>0.78</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Percent age 15-29</td>
<td>0.50</td>
<td>-0.47</td>
<td>0.69</td>
<td>0.17</td>
<td>-0.30</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**D. Discussion**

Even for an incapacitation skeptic, the results above are very surprising. Higher gun sentences are associated with higher levels of serious violent crime. This finding not only fails to confirm Ludwig’s hypothesis, but seems to provide evidence for the opposite.

The most natural explanation would be to take a page from Levitt’s study of imprisonment and crime. Could judges and prosecutors be responding to higher levels of neighborhood crime with longer penalties? I have already shown that there is little evidence that prosecutors or judges use neighborhood-level data to guide prosecution, and as Figure 4 shows, gun sentences are evenly distributed among high- and low-violence neighborhoods.

It could be that violence substitution is so powerful that incremental imprisonment increases crime. This would be out of line with the studies of imprisonment surveyed above, which suggest that imprisonment decreases crime, although the effect is small. Still, the amount of research conducted on sentencing for specific crimes is limited. It is much more common to review the rates of imprisonment for an entire county or state, not to break down how changes in sentences for specific crimes affect community crime rates.

The clearest thing that can be said for now may be that this analysis does not support Ludwig’s hypothesis that gun sentence enhancements reduce crime. These results follow SPAC and others in failing to find that longer sentences for gun-carrying are associated with violence
The positive association between longer sentences and higher rates of violent crime provides one more reason to pause before using sentence enhancements to reduce violence.

Proposals to selectively incapacitate by targeting and imprisoning “high risk” individuals have generally been too good to be true. Jens Ludwig himself reached this conclusion in a previous study of the “Project Exile” sentence enhancements in Virginia. He and co-author Stephen Raphael wrote, “. . . crime control strategies that primarily involve tough sentencing enhancements for some designated group of offenders believed to represent a high-risk to society seldom deliver their promised punch.”

Gun sentence enhancements may be another one of these minimally effective strategies.

All of the limitations described above still apply to this analysis. No causal relationship can be drawn from the data available to us. The small sample size of neighborhoods makes it difficult to accurately assess the correlations. And the rough methodology of defining sentence lengths and time lags invites the possibility that the results are a product of design choice, not the underlying data. With those caveats, this analysis follows much other research in failing to support Ludwig’s hypothesis that sentence enhancements substantially reduce violent crime.

V. THE POLITICS OF NON-PARTISANSHIP

Even as Ludwig writes in support of a policy that he presents as a windfall, he insists that his work is not political. He predicts confidently that the proposed sentence enhancements of HB2265 would prevent 400 serious crimes annually and provide a five-to-one return on investment. At the same time, he writes, “While the University of Chicago Crime Lab does not take political positions, including offering views about specific pieces of proposed legislation, we do believe it is important for policymakers to have as accurate a sense as possible for the potential costs and benefits associated with new legislative proposals.” When political actions are hidden, it becomes more difficult to engage them and expose the ideological underpinnings that attach to the application of social science research. Only by analyzing Ludwig’s actions as political can one understand the limitations, assumptions, and blind spots inherent in his arguments.

In presenting his work, Ludwig explicitly ties his lack of political motive to his reliability; it is because he has no agenda that we should trust especially him to present “as accurate a sense as possible” of the merits of the proposed bill. One might quibble with the question of whether research can ever fail to be political: in Howard Becker’s words, the meaningful question may not be whether to take sides, but instead whose side to take. But even among those who value “objectivity” among researchers, Ludwig fails to adopt a neutral stance.

In Ludwig’s presentation of his estimate, he fails to address any of the ample evidence that sentence enhancements do not reduce crime. This is, in effect, the entire question of his analysis: will imprisoning gun carriers for longer periods reduce crime? In an exchange with a Chicago Tribune columnist, mentioned above, he writes that much of the empirical evidence against sentence enhancements is “not very good.” But Ludwig does not even grapple with the evidence that

222 Howard Becker, Whose Side Are We On?, 14. SOC. PROBLEMS 3 (1967).
223 Eric Zorn, Reasonable Doubt About Mandatory Minimum Sentencing, CHI. TRIB. (Oct. 18, 2013),
weighs against him. For the purposes of the public debate, as Ludwig chooses to enter it, the numerous studies and evaluations cited by the 32 professors who wrote in opposition to HB2265 might as well not exist.224

Ludwig’s public presentation of the evidence spoke in absolutes and certainties. In his column in the Chicago Tribune, he wrote, “Our research finds that at least 3,800 crimes, including more than 400 serious violent crimes, would be prevented each year in Illinois because the people who would commit those crimes would be in prison.”225 The crimes would be prevented, period. And when Ludwig admits uncertainty, he does so only to suggest that the true benefits are even greater than he is willing to estimate: the real costs will probably be smaller and the actual benefits even larger. For example, he writes that an increase in sentence lengths for gun-carrying is likely to:

- Cost less, perhaps substantially less, than the State’s sentencing advisory body estimates: “The best available evidence, however, suggests that the true costs associated with the legislation are likely to be lower than this figure – perhaps substantially lower – because of the expected deterrent effect of more consistent punishment for UUW.”226
- Reduce the prison population by preventing violent crimes: “One important way to reduce the over-representation of disadvantaged groups in prison is to reduce prison sentences for selected crimes, particularly those that do not pose a direct threat of violence to the public. Another way to reduce the prison population is to prevent seriously violent crimes of the sort that most people agree merit serious prison sentences.”227
- Substantially outweigh the negative effects of increased incarceration: “We have no way of knowing what [the] unmeasured social costs of imprisonment are at present. But our calculations suggest that unless the collateral costs of incarceration are multiple times the direct DOC budget costs, the proposed legislation would still be likely to pass a benefit-cost test.”228

The only factor Ludwig suggests may decrease the impact of sentence enhancements is the “social costs” of imprisonment, and he essentially writes these off as very unlikely to outweigh the calculated benefits.

The evidence Ludwig marshals in support of the bill simply does not show itself to objectively lead to the conclusion that sentence enhancements are a “sure deal” for Illinois. This is where Ludwig’s claims to objective neutrality, and the legitimacy associated with that stance, fall short. To argue this point is not to say that Ludwig wrote in bad faith. It is only to say that Ludwig


224 STEPHANIE KOLLMANN & DOMINIQUE D. NONG, COMBATING GUN VIOLENCE IN ILLINOIS: EVIDENCE-BASED SOLUTIONS, NW. L. BLIHM LEGAL CLINIC (2013), http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?filename=3&article=1000&context=jelc_symposium&type=additional [perma.cc/X47D-VM49].

225 Ludwig, supra note 29.

226 LUDWIG, supra note 6, at 1.

227 Id. at 2.

228 Id. at 6.
formed his own opinion on a research question of deep importance to him. He and others at the Crime Lab grew attached to that position. In advocating for that position, Ludwig failed to account for the limitations of his argument and tilted his analysis of the proposal’s uncertainty to make his analysis seem stronger than it was.

At this point, Ludwig stopped presenting only the “strongest possible social science research.” He started advocating for a policy he believed in. This is a basic form of political engagement: making a partisan argument for one’s position, emphasizing its strengths, and downplaying its weaknesses. One might argue that this is inevitable for researchers. There is too much uncertainty, too many gaps in what is known; one cannot fail to wade in, but must make assumptions and guesses. Still, it is critical to acknowledge where one has taken a side, and what side one has taken, as Ludwig fails to do here.

A. Political and Ethical Action in Ludwig’s Analysis

Even if the Crime Lab’s analysis was, as John Maki charged, “one of the primary pieces of a public relations campaign designed to pass as symbolic tough-on-crime bill,” Ludwig might protest that the use of his work for political ends does not make his work inherently political. Of course good research will be used in political actors’ attempts to enact public policy. But in applying his research to a specific piece of legislation, Ludwig acts politically and fails to grapple with the estimate that the proposed bill will imprison 6,000 people—mostly black, poor people—annually. He also does not seriously engage the question of alternative investments and political agenda-setting.

As a result of the sentence enhancements in HB2265, 6,000 additional people would be imprisoned annually, as estimated by SPAC. Almost all of these people would be black; 79% of people in Illinois imprisoned for Unlawful Use of a Weapon offenses are black, according to Illinois Department of Corrections data. In Cook County, the disparity is even greater: 83% of people imprisoned for Unlawful Use of a Weapon are black, while only 3% are white. According to these estimates, 4,800 black people who would otherwise be free would be imprisoned under the proposed sentence enhancements. Although SPAC did not estimate the income of these individuals, it is safe to assume that the large majority of them are poor.

How would Illinois change if 4,800 additional black people were incarcerated each year? Ludwig gives a nod to the harm this change might bring but treats the impact as, essentially, unknowable. He writes, “But it is almost surely the case that imprisonment also creates other

230 Id. at 2.
232 Id. (Author’s calculations using data in Table 8).
233 Author calculations.
collateral costs to society, such as the adverse effects on families and children and even entire communities. We have no way of knowing what these unmeasured social costs of imprisonment are at present. This statement sets up the reduction in violence caused by sentence enhancements as essentially known and the harms of incarceration as essentially unknowable, except for the financial costs of running prisons. However, numerous studies have documented how incarceration takes resources from families, increases behavioral problems among children, and negatively “marks” an incarcerated person for life, as described above.

This evidence was available at the time Ludwig wrote his memorandum. It would not be difficult to estimate the money families will pay on phone calls, prison visits, and commissary funds; the lost earnings of the imprisoned individuals; and the trauma inflicted on children and families. None of this is considered. Ludwig only discusses the potential benefits, and renders invisible the negative impact of incarceration on the (mostly black) communities where its use is most prevalent.

Political scientist E.E. Schattschneider wrote, “The definition of the alternatives is the supreme instrument of power.” There are many questions a social scientist might ask about a policy that proposes to reduce violence by putting around 6,000 people in prison, at an annual cost of around $130 million. They might ask, “How many crimes will that prevent?” They might ask, “How will that affect communities?” Or they might ask, “How does that compare to other $130 million interventions?” Then, they might consider any subset of the possible dimensions of each question. The questions one asks and the possibilities one explores heavily determine the results of one’s analysis. Ludwig’s narrowing of scope prevents certain questions from being raised: for example, what are the long-term consequences of investing in policies with positive externalities (programs for children, resources for families and communities) versus policies with negative externalities (increased imprisonment)?

In LANGUAGE OF THE GUN, Bernard Harcourt explores the decisions researchers make in deciding how to conduct research and present their results. He argues that social scientists must embrace the paradigm of “dirty hands:” one cannot do social-scientific work without making a range of assumptions that will strongly guide the conclusions of one’s work. In deciding what assumptions to make and how to draw conclusions from one’s findings, one makes “leaps of faith” between the evidence and one’s conclusions.

Harcourt develops his argument through an analysis of Steven Levitt’s article on the economics of imprisoning children, Juvenile Crime and Punishment. Levitt’s article studies the link between punishment and crime, and compares states with different levels of punitiveness towards children to draw conclusions about the deterrence effect of harsher punishments. Levitt argues that this evidence can be used to understand whether deterrence is more effective than incapacitation. However, Harcourt rebuts that there is no feasible way to tell how much of an estimated crime decrease was caused by incapacitation or deterrence; Levitt takes a leap of faith, guided by the rational actor theory of economics, to build an argument about which is more

235 LUDWIG, supra note 6, at 6.
238 Id. at 220–22.
239 Id. at 225–26.
effective, and why.\textsuperscript{240} Levitt presents as a conclusion of his work something that is actually an assumption Levitt carried into his analysis.

Harcourt conducts a similar analysis of sociologist Phillipe Bourgois’ ethnography of New York Puerto Rican drug dealers, \textit{In Search of Respect: Selling Crack in El Barrio}. Harcourt praises his work as a “masterpiece,” but notes that his policy recommendations—from free childcare, to large surges in transfer benefits, to accessible health care—do not follow cleanly, or indeed, nearly at all, from his ethnographic observations.\textsuperscript{241} Or, to the extent that they do, they do so only if one has taken on the frame with which Bourgois sees the world.\textsuperscript{242} Bourgois, like Levitt, fills in the gaps of what he can prove with what he believes. And in filling the gaps, Harcourt concludes, researchers necessarily dirty their hands, for the way they fill those gaps plays a large role in determining the conclusions they reach.\textsuperscript{243} Harcourt does not argue that this gap-filling is illicit or mistaken; instead, this inevitable step in research and analysis should be noticed, accounted for, and discussed.

Whether taking a leap of faith is necessarily political is up for debate, but it is, undoubtedly, an ethical choice. Harcourt describes this as the “shaping of the human subject.”\textsuperscript{244} For example, in considering the effect of imprisoning children solely in economic terms, one takes the position “that juvenile and adult incarceration are in some sense fungible.”\textsuperscript{245} An economic analysis allows one to weigh and trade the imprisonment of adults and children; both can be analyzed in economic terms. There are other ethical dimensions. Micheail Ward was 18 years old when he shot Hadiya Pendleton; he was 17 years old when he was convicted of a gun offense that, according to the proponents of HB2265, should have sent him to prison for three years. Ludwig’s leap of faith is looking at Ward and other gun carriers and jumping from the modest evidence supporting sentence enhancements to a firm conclusion that incapacitation guarantees the effectiveness of HB2265. But his ethical decision is to view Micheail Ward primarily as a source of harm to be controlled instead of as a source of unmet potential.

In claiming that his only role is to present the best evidence, Ludwig conceals the enormous human infrastructure—the beliefs, commitments, and experiences—that frame his reasoning. By denying his own subjectivity, Ludwig obscures a consideration that belongs in our discussion of public policy: that the commitments and beliefs of those who are allowed to debate policy determine, in large part, the policy we get. This means that the assumptions, beliefs and commitments of those who guide policy discussions must be fair game for discussion; otherwise, those participants are taking some of the most important action off of the table.

\textbf{VI. CONCLUSION: THE MEMORANDUM’S LEGACY}

I have shown that there are many reasons to believe that violence substitution will follow gun carrier imprisonment, presented a new analysis that fails to support Ludwig’s hypothesis, and argued that the Crime Lab’s advocacy cannot be understood as apolitical. If the focus on one man’s

\textsuperscript{240} Id.
\textsuperscript{241} Id. at 226–29.
\textsuperscript{242} Id. at 228.
\textsuperscript{243} Id. at 229.
\textsuperscript{244} Id. at 235.
\textsuperscript{245} Id. at 230–231.
research seems strange, consider that Ludwig’s work lived on in Chicago long after the debate quieted. His validation of the punishment paradigm of crime reduction reverberates in the language and ideas Chicago political leaders used to support sentence enhancements for years to follow.

On July 22, 2017, 388 people had been murdered in Chicago since the start of the year.\(^{246}\) Over the past two years, social services in the city were drastically cut, in part due to the Illinois government’s failure to pass a budget and fund social services. In January 2016, the state’s largest social service provider cut 30 programs and 750 positions; the State was more than $6 million behind in promised payments to the organization.\(^{247}\) Several violence prevention programs serving Chicago residents lost their funding in 2015, and dozens of service providers across the state sued the State for failing to pay them more than $160 million, resulting in program and service cuts.\(^{248}\)

Although HB2265 did not pass, its sponsors introduced variations of the bill in 2014,\(^{249}\) 2015,\(^{250}\) and 2016.\(^{251}\) Chicago’s political leaders continued to use Ludwig’s framework to argue for longer gun sentences, claiming that the deterrent effect of extending imprisonments would reduce violence. In February 2017, when 11-year-old Takiya Holmes was shot and killed in Chicago, Police Superintendent Eddie Johnson tied her death to short gun sentences. “There’s no deterring to taking a life when you know you’ll likely be out of jail in a matter of months,” Johnson said. “How many children do we need to lose before the promises that were made by certain legislators are kept? How many?” Mayor Rahm Emanuel continued to make similar arguments, claiming that gang members don’t respect Chicago’s weak gun penalties. “The gang members know that when it comes to judges, the courts and sentencing it’s a joke. And that should not exist,” Emanuel said.\(^{252}\)

Sustained advocacy ultimately led to a sentence enhancement bill, Senate Bill 1722, being

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passed in 2017. Making a prediction that far exceeded Ludwig’s estimates, Police Superintendent Johnson testified at a House committee hearing that the proposed bill, if passed, would lead to a 50 percent reduction in Chicago gun violence within three years.\textsuperscript{254} He drew on the language of deterrence and punishment-certainty, stating, “[Gun carriers are] released back to the streets so quickly that they see no reason to change their behavior,” and, “[T]he purpose is to create a culture of accountability.”\textsuperscript{255} Governor Bruce Rauner signed the bill on June 23, 2017.\textsuperscript{256} The new law increases the sentence for illegal gun possession for some individuals previously convicted of felonies to seven-to-fourteen years.\textsuperscript{257} The bill allows judges to impose shorter sentences by providing a written explanation for the deviation.\textsuperscript{258}

In an article titled, “A Law to Make Thugs Think Twice Before Shooting,” the Chicago Tribune’s editorial board praised the new bill, adopting the same deterrence/incapacitation logic used in Ludwig’s memo. “This measure should send a message to violent criminals, gang members among them, that getting caught with a gun may well cost more time in jail. Therefore some may think twice about carrying—and firing—weapons,” they wrote. “And for those who ignore the warning, the consequence still may benefit the rest of us: The longer period of time dangerous people sit behind bars, the more days and nights they are not on the streets, potentially firing their weapons.”\textsuperscript{259} The logic of incapacitation and deterrence has no need to take account of racial segregation, abandoned neighborhoods, hungry families, and over-policed communities. Instead, the scope of analysis is limited to the “bad guys” of the world and the question of how to motivate them at the margins.

Chicago politicians continue to frame the gun violence problem in terms of punishment and “accountability.” In July 2017, veteran Alderman Edward Burke introduced an ordinance to punish parents who do not prevent their children from possessing firearms.\textsuperscript{260} The ordinance would require parents who know their children possess firearms to “make reasonable efforts” to remove the weapon, or report their child to the police.\textsuperscript{261} Parents would be punished with community service for failing to follow the ordinance.\textsuperscript{262} Alderman Burke stated, “We need to step forward and put in place a system that holds parents accountable while providing them with support services.”\textsuperscript{263} In the Alderman’s view, parents are not sufficiently motivated by the desire to keep their families and


\textsuperscript{255} Id.


\textsuperscript{257} Id.

\textsuperscript{258} Id.


\textsuperscript{261} Id.

\textsuperscript{262} Id.

\textsuperscript{263} Id.
communities safe; some punishment framework, however minor, is needed to “hold parents accountable.”

Chicago’s newest mayor, Lori Lightfoot, also relies on accountability and punishment language in framing violence talk. Lightfoot was elected in April 2019 after running on a platform of reform and police accountability. Even as a liberal self-described reformer, Lightfoot has chosen to use punishment and imprisonment framings when discussing violence. Arguing for more pretrial jailing of people accused of gun possession crimes, Lightfoot said:

We can’t keep our communities safe if people just keep cycling through the system because what that says to them is, I can do whatever I want, I can carry whatever I want, I can shoot up a crowd and I’m going to be back on the street. How does that make sense?

Lightfoot emphasizes punishment-certainty and incapacitation, the two cornerstones of Ludwig’s memorandum, in her argument. Lightfoot’s remarks could have been written by the Crime Lab, circa 2013.

Punishment language shifts accountability for gun violence. Just like Police Superintendent Johnson described the need for a “culture of accountability,” Alderman Burke points the finger of responsibility at black families. Mayor Lightfoot points her finger at irresponsible, perhaps uncaring judges. Punishment-based narratives are politically useful: they allow political leaders to place the blame on others. Ludwig’s memorandum and his public support of sentence enhancements strengthened these punishment-based narratives.

The primacy of punishment narratives prevents sentence enhancements from being compared against other interventions. There are promising strategies like reducing gun trafficking, changing policing practices, offering cognitive behavioral therapy, and providing jobs and other resources. Much of the best social science research supports these

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264 Id.
265 Mark Guarino, Lori Lightfoot Promises ‘Reform is Here’ as She Becomes Chicago’s 56th Mayor, WASH. POST (May 20, 2019, 2:38 PM), https://www.washingtonpost.com/national/lori-lightfoot-promises-reform-is-here-as-she-becomes-chicagos-56th-mayor/2019/05/20/6f500a38-7b1a-11e9-a5b3-34f3edf1351e_story.html [https://perma.cc/GEW7-X87K].
270 See Chicago Jobs Program Reduces Youth Violence, Urban Labs Study Shows, UNIV. CHI. (June 29, 2017), https://news.uchicago.edu/article/2017/06/29/chicago-jobs-program-reduces-youth-violence-urban-labs-study-
alternatives. For example, we know that networks of violence are stable over time even as individuals are removed. If removing individuals from violence networks does not disrupt those networks, it follows that policymakers cannot sustainably reduce violence just by taking people off of the streets. But such nuances find no home in the punishment frame.

The logic of incapacitation has proven intuitive and resilient. It has not been difficult to get political leaders to invest in policies that send more people to prison for longer periods of time. The real challenge is getting them to invest in anything else. As mayors, aldermen, and police superintendents understand, the punishment paradigm shifts accountability away from resource providers and transfers it to police, judges, and jailers. And so, even after its foundation has been dismantled, Ludwig’s legitimation of the punishment paradigm lives on. It lives in the stories we tell about gun violence, in the prison cells where even more people will live, and in vacuums in communities across the city.

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