

JULY 2022

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INTRODUCTION

The criminal justice system in democratic societies serves many vital social purposes. Among the most important is preventing crime. The system's activities are traditionally understood to prevent crime by three mechanisms: incapacitation, general deterrence, and specific deterrence. Incapacitation is perhaps the most widely known: persons charged with crimes may be incarcerated pre-trial and those who are convicted may be sentenced to terms of incarceration in local jails or in state or Federal prisons.

Incapacitation refers to the crimes averted by a person's physical isolation during the period of their incarceration. The two other mechanisms of crime prevention involve possible behavioral responses: First, the *threat* of punishment may discourage criminal acts. In criminology this response is termed general deterrence. The second behavioral mechanism only comes into play if general deterrence fails and a crime is committed and the perpetrator is apprehended, convicted and sanctioned. Criminology uses the term specific deterrence as the label for the potential chastening effect of the *actual experience* of the sanctioned punishment on reoffending. The experience of punishment, however, might not have the chastening effect implied by the label, but instead might increase, not decrease, future offending for many possible reasons. These include the stigma of a criminal record and associated legal restriction limiting access to legal labor markets, the atrophy of skills for effective functioning in legal labor markets while incarcerated, and the erosion of bonds during incarceration with non-criminally involved family and friends (Jonson, 2012; Western, 2021: Denver and Ballou, 2022).

This essay summarizes the scientific evidence on the effectiveness of each of these mechanisms of crime prevention and discusses the implications of the findings for criminal justice public policy generally, and more specifically for stemming the recent surge in homicide.



INCAPACITATION

The following summary of the evidence on incapacitation effects draws heavily from a review of the incapacitation literature by Bushway (2017). Bushway distinguishes two types of incapacitation studies, which he refers to as "bottom-up" and "top-down." Bottom-up studies were mostly done in the 1980s and 90s. These studies used individual-level arrest record data or self-reporting of criminal activity to estimate individual rates of offending that in turn form the basis for extrapolating the crime reduction that would have ensued had the individuals been incarcerated.

Bottom-up studies suffered from important limitations, stemming in part from extrapolating from arrest frequency to offending frequency and in part from recall issues related to self-reports of offending frequency over extended periods of time. They are also flawed because they did not take into account the concept of replacement. The incarcerated may be replaced by others who fill their "offending niche." For example, the offending niche of incarcerated drug dealers may be quickly be filled by other would-be dealers in the community. More generally replacement of incarcerated offenders may occur by processes analogous to those of dynamic models of animal populations whereby deaths of some population members opens ecological niches for the survival of other population members.

Notwithstanding the limitations of bottom-up studies, one notable and uncontested finding from these studies is that individual-level rates of offending are highly skewed, meaning only a small fraction of people who actively offend do so at a high rate. These bottom-up studies, along with studies from a much larger literature called "developmental criminology," also find that crime is a young person's game, mostly young men. Specifically, both arrest data and self-report data show that criminal activity generally peaks in young adulthood and begins a steady decline thereafter. For example, a study of recidivism of persons released from Federal prisons found that 64.8% of former prisoners who were younger than 30 at the time of their release were rearrested within 8 years whereas the counterpart percentage for those 50 to 59 was 26.8% and for those 60 or older only 16.4% (US Sentencing Commission, 2017). The fact that recidivism rates for persons age 50 or older are less than half the rates of persons in their 20s demonstrates that nature's best cure for crime is getting old! Both of these findings—the extreme skew of offending rates and the decline in recidivism with age--have important policy implications, discussed below.

The more recent generation of incapacitation studies, which Bushway refers to as top-down studies, mostly use regression methods to measure the association between state-level crime rates and rates of imprisonment. A negative association—higher imprisonment rates are associated with lower crime rates—is interpreted as measuring the crime reduction effect of incarceration, stemming from a combination of incapacitation and deterrent effects. Bushway reports that the conclusions of the top-down studies vary widely, from no material impact on crime to modest but still material crime reductions.

As elaborated in a report of the National Research Council (NRC, 2014), top-down studies suffer from a number of serious technical flaws, many of which involve the difficulty of separating cause from effect--while more imprisonment may prevent crime, more crime may result in more imprisonment. To these criticisms Bushway adds Lofstrom and Raphael (2016) finding of very large reductions in the crime prevention effect of incarceration as the scale of incarceration increases. Stated differently Lofstrom and Raphael find that as the imprisonment rate increases the crime reduction effect of further increases in the imprisonment rate grows smaller. They attribute the declining crime reduction effect size to what in economics is called diminishing marginal returns—as more of a resource is used the productivity of

additions to the resource stock declines. This finding was very influential in Bushway's framing of his conclusion that "incapacitation should not be relied on as a primary motivation for a broad-based incarceration regime [and] incapacitation cannot be used to justify the current levels of incarceration in the United State (p. 37).

In combination the findings from the two types of studies reviewed by Bushway suggest that incapacitation is a highly inefficient form of crime control. The concept of replacement means that imprisoning one person who offends may simply create space for another to take his or her place within the community and the pronounced declines in offending rate with age means that crimes averted by the incapacitation of aged prisoners serving long prison sentences are small. Also, due to the extreme skew in individual offending rates, for every person who offends at a high rate who is incapacitated via incarceration, there are many more people who offend at a low rate who are also being incarcerated. This results in an unjust system in which many people are serving longer sentences in order to net-out the crimes of a small number of those who offend at a high rate.

SPECIFIC DETERRENCE

As previously stated, specific deterrence refers to the potential chastening effect of the actual experience of punishment, which for the purposes of the topic of this review is the experience of incarceration. However, as also noted, that experience might indeed have the reverse effect and increase, not decrease, recidivism. Three reviews of the literature on the effect of the experience of incarceration on recidivism by Nagin, Cullen, and Jonson (2009), Loeffler and Nagin (2021), and Petrich, Pratt, Jonson, and Cullen (2021) reach the same conclusion—evidence of a specific deterrent effect is scant. Instead, most studies reach the conclusion that incarceration has no effect on recidivism or has an aggravating criminogenic effect.

The specifics of this shared conclusion are important, but first a brief overview of the research design of these studies. None of the hundreds of studies reviewed by Nagin, et al. (2012) and Petrich, et al. (2021) are based on randomized experiments. Instead, all are based on non-experimental designs using administrative data. The chief methodological challenge to obtaining a valid estimate of the impact of the experience of incarceration on recidivism is the so-called selection problem: persons receiving sentences involving incarceration may be more prone to recidivate than those who do not. The Loeffler and Nagin (2021) review focuses on two types of studies--those based on the random assignments of cases to judges, called judge instrumental-variable studies, and those based on discontinuities in sentence severity in sentencing grids, called regression discontinuity studies. Both types of studies are designed to account for potential selection bias in estimates of the impact of incarceration on reoffending based on non-experimental data.

The Loeffler and Nagin (2021) review shows that most of the thirteen judge IV and regression discontinuity studies of the experience of post-conviction imprisonment find little impact of the experience of incarceration on the probability of recidivism. A small number of studies do, however, find that incarceration has significant effects on recidivism, either by reducing rates or by increasing rates. Studies that show recidivism reducing effects are mostly found in settings such as Scandinavia (Bhuller et al. 2019) where rehabilitative programming is emphasized. Criminogenic effects are found in settings in which such programming is not emphasized (Mueller-Smith 2015; Harding et al., 2017).

The findings of five studies of pretrial incarceration are more consistent—four of five find a deleterious effect of pretrial detention on post-release offending (Heaton et al. 2017; Gupta et al.; Leslie & Pope 2017; Dobbie et al. 2018). From a policy standpoint, the finding of a generally deleterious effect of pre-trial detention on offending adds to a larger body of evidence pointing to the social value of limiting pretrial detention only to those individuals who have committed very serious crimes or who represent a material risk of flight (Smith, 2022).



GENERAL DETERRENCE

The threat of punishment may prevent crime by causing people to refrain from committing crime out of fear of being punished. As noted at the outset, this effect is termed general deterrence in criminology. It is conceptually distinct from specific deterrence because the potentially chastening effect of the actual experience of punishment can only occur, barring false conviction, after general deterrence has failed. More than 250 years ago, the Enlightenment philosopher Cesare Beccaria observed, "it is better to prevent crimes than punish them" ([1764] 1986, p. 93). He is right: crimes that are prevented by deterrence or otherwise avert the social cost of both crime and punishment.

Studies of general deterrence come in many different forms. In the arena of policing, there are many examples of randomized experiments, for example, testing whether increasing police presence at crime hotspots is effective in reducing crime at the hotspot without displacing it elsewhere, which is indeed the case. For a review of policing experimental studies see NRC (2018) and Chaflin (2022). There are also many examples of before-after studies measuring whether a policy change, for example, enactment of a statute increasing penalties for a specific type of crime, effects the measured rate of that crime. Findings of such studies vary widely (Nagin, 2013). Still another large class of deterrence studies, called perceptual deterrence studies, survey individuals on their perceptions of the risk of punishment and the severity of punishment and relate these perceptions to their self-reported offending or intentions to offend. These studies generally find negative, deterrent-like associations between risk perceptions and self-reported offending. Findings on the association of perceived severity and self-reported offending are more varied (Nagin, 1998).

What is known about general deterrent effect of imprisonment? This evidence is thoroughly reviewed in Chapter 5 of the National Research Council report *The Growth of Incarceration in the United States: Exploring Causes and Consequences* (NRC, 2014). Here I will only summarize the bottom line conclusion. Beccaria, who might well be described as the originator of modern deterrence theory observed, "One of the greatest curbs on crime is not the cruelty of punishments, but their infallibility.... The certainty of punishment even if moderate will always make a stronger impression" ([1764] 1986, p. 58). Research conducted two centuries after this pronouncement generally supports Beccaria's prediction. Studies of the impact of increasing sentence severity generally find no evidence of a deterrent effect or at most a modest effect as concluded in NRC (2014.) In contrast, the very large literature studying the impact of increasing police numbers or their strategic deployment, for example at crime hot spots, consistently find a deterrent effect (NRC, 2018; Chaflin, 2022). These findings led me to proffer a restatement of Beccaria's "certainty principle"—it is the certainty of the threat of apprehension, not the severity of the ensuing consequences, that is the more effective deterrent (Nagin, 2013).

The revised certainty principle has two important implications. First, it calls into question the effectiveness of over four decades of U.S. crime-control policy predicated on the premise that lengthy prison sentences, including mandatory minimum sentencing, are an effective deterrent to crime. Second, according to the revised certainty principle, crime-prevention policy should instead focus on bolstering the certainty of apprehension. Such policies involve increasing police numbers; better use of the police by strategically deploying officers in ways that heighten their presence in high-crime areas and/or reduce criminal opportunities; or alternatively, making changes to the physical environment in order to reduce criminal opportunities. Examples of strategic use of police resources include hot spots policing and problemoriented policing (NRC 2018) and examples of criminal opportunity reduction strategies include delicensing problem bars or improving the physical protection of vulnerable targets (Clarke, 1997; Felson, 1987).



POLICY IMPLICATION FOR CURRENT SPIKE IN HOMICIDE

Beginning in the early 1990s, crime rates for all FBI index crime types began a steady three-decade long decline that ended coincidently with the onset of the COVID-19 pandemic. I include the word "coincidentally" because no one has yet provided anything close to a convincing explanation for the interruption of the great crime drop. The interruption, however, was not consistent for all index crime types: homicide rates sharply increased, albeit remaining far below rates in the early 1990s. Auto theft rates also increased, while robbery and larceny rates declined still further from their pre-pandemic levels, and the trend in burglary rates remained unchanged (Meyers, et al. 2021). See also Rosenfeld and Lopez(2020). As trends in rates of different types of crime typically coincide, the reasons for the sharp break in this empirical regularity during the pandemic is a puzzle that is yet to be solved. Without a clear understanding of why some crime types increased as others decreased and still others remained unchanged, sharp shifts in policy are not justified. Specifically, in the past, spikes in crime, or horrific crime incidents, have prompted draconian increases in punishment severity, increases which were not grounded in solid science surrounding their effectiveness. Hopefully, that mistake will not be repeated and our elected representatives heed Supreme Court Justice Kennedy (2003) admonition: "Our resources are misspent, our punishments too severe, and are sentences too long."

Of particular concern in this regard is that the homicide spike might trigger still further unwise policy changes escalating sanctions for violent crime. As argued, increases in already long sentences cannot be justified based on either their deterrent or incapacitation effects. In the past, such policy responses have resulted in a dramatic increase in the representation of lifers in U.S. prisons, with no material return in improved public safety. In 1984, the number of lifers totaled 34,000, or 4.8 percent of the total state prison population across all 50 states. By 2020, the numbers of lifers had swollen by nearly a factor of 5 to 161,512—12.9 percent of the total state prison population. If those who are effectively serving life sentences—that is, individuals with sentences of 50 years or more—are added, then the total surges to 203,865—or, 16.2 percent of the state prison population (Nagin, 2022). Even as the total prison population has modestly declined since 2008, the number of lifers has increased by 13 percent (Nellis, 2021). This is a serious problem. The slow accumulation of lifers in U.S. prisons is turning them into old age homes. Between 1993 and 2016, the percentage of people aged 50 or older in prison has quadrupled from 5 percent to 20 percent, and the percentage of people 40 or older in prison has more than doubled (Nellis, 2017; 2021). The bottom line is that life sentences make no sense from a crime control perspective.

What, then, is an evidenced-based response to the two year-long spike in the homicide rate—a spike that has been concentrated in disadvantaged minority neighborhoods (Kapustin, Neumann, and Ludwig, 2022)? Numerous reviews of policing and crime (cf. Chaflin, 2022; NRC, 2018; Nagin, 2013) reach the same conclusion—police if properly used are effective in preventing crime. The murder of George Floyd by police office Derek Chauvin, however, has spawned much needed consideration of the role and manner of policing in the United States and more specifically about how police should go about securing public safety. As part of that national conversation some have proposed dispatching social or mental workers, not police, for certain types of calls for service. Also, many have urged making large investments in

programs to correct the social and economic inequalities that are seen as the root causes of concentrations of violence. Whatever the merits of these policy changes, they cannot provide immediate relief from the present spike in lethal violence in public places.

The spike is also a type of threat to public safety for which a police response is unambiguously required and for which there is evidence that an effective response can be mounted. The response, however, will have to be tempered by the new realities of policing in the post-Floyd era. Koper and Mayo-Wilson (2012) conduct a careful review of the effectiveness of various forms of police intervention to curb gun violence. Their review shows that one form of intervention, directed patrols, is effective. Directed patrols involve assigning additional officers to high-crime areas at high-risk times and allowing them to focus on proactive investigation and enforcement (e.g., intensified traffic enforcement and field interrogations of suspicious persons). They conclude that directed patrols are effective in curbing gun violence.

Directed patrols will not be popular in some circles because they require the use of confrontational policing tactics such as stop, question, and frisk and intensified traffic enforcement. There are five important keys to mitigating the negative consequences of using confrontational policing tactics. First, there must be effective communication with community leaders and institutions such as religious and merchant groups on the purpose and duration of the operation.

Second, the operation should be coordinated with non-police community-based interventions intended to interrupt or diffuse the sources of violence of the violence in public spaces, for example gang rivalries. Third, It is imperative that the duration of the operation be short-term. Once the spike has subsided the operation must be wound down. Its continuation should not be rationalized as necessary to averting reoccurrence of violence. The confrontational tactics that are inherent to directed patrols should instead be replaced with non-confrontational problem-solving activities designed to correct the sources of the violence spike. These may include a continuation of activities described in the second point. Fourth, directed patrols must be used in a targeted fashion unlike the City of New York Police Department's controversial broad based use of stop, question and frisk. Fifth, confrontational policing tactic must be seen as a last resort tactic that is used only when use of other non-confrontational policing tactics have been tried and found to be ineffective.

Crime control policy in the United States in last decades of the 20th Century was largely guided by the misperception that mass incarceration was an effective and socially efficient policy for preventing crime. It is not. Gradually, there was a growing recognition that police, if properly deployed, were effective in preventing crime. What was unrecognized, or at least under-appreciated by the persons responsible for directing the activities of the police is that confrontational policing tactics exact large social costs independent of any effect they might have in preventing crime Manski and Nagin (2017). Effective policing in a democratic societies must be cognizant of these costs which in turn requires that police only sparingly wear their warrior mantle. Instead police should mostly wear their guardian mantle, a mantle that requires civil relations between police and citizens.

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