Incapacitation

Shawn D. Bushway[*]

People who are incarcerated are incapacitated: they do not commit as many crimes as they would have in the absence of incarceration. The best modern estimates for the size of the effect are modest, in the neighborhood of two to five serious crimes per year of prison time. These effects are larger if incarceration is used in a more targeted way for higher-rate offenders, but will inevitably decline as incarceration is used more heavily. This chapter reviews the research and presents the following basic recommendations for policy: (1) incapacitation should not be relied on as a primary motivation for a broad-based incarceration regime; (2) incapacitation cannot be used to justify the current levels of incarceration in the United States; (3) "release valve" policies to reduce the prison population in the short term should focus on releasing individuals who are at lowest risk for offending; and (4) policymakers should be aware of the relative incapacitative effects of different policies, even if their main motives do not include incapacitation.

INTRODUCTION

There are many different purposes of sentencing in criminal law, including the utilitarian goals of deterrence, rehabilitation and incapacitation, and the retributive goal of just deserts.[1] Incapacitation reduces crime by literally preventing someone from committing crime in society through direct control during the incarceration experience—or, more bluntly, "[a] thug in prison can't mug your sister."[2] This directness is the main attraction of incapacitation.

* Professor of Public Administration & Policy and Professor of Criminal Justice, University at Albany, State University of New York. This chapter is based in large part on Shawn D. Bushway, *Incapacitation*, *in* Encyclopedia of Criminology and Criminal Justice 2443 (2014).

1. Michael Tonry, *Purposes and Functions of Sentencing*, 34 Crime & Just. 1 (2006). *See* Jeffrie G. Murphy, "Retribution," in the present Volume; Daniel S. Nagin, "Deterrence," in the present Volume; Francis T. Cullen, "Correctional Rehabilitation," in the present Volume.

2. Ben Wattenberg, *Circling Crime Hawk*, Wash. Times (June 10, 1999).

While it is not impossible to commit a crime in prison, the possibility is limited by the direct control exerted by the correctional system.[3]

The size of these benefits depends directly on the offending behavior of those individuals who are incarcerated. Incapacitation benefits will be larger for policies that manage to incarcerate higher-rate criminals. Most criminologists believe that criminal offending is highly skewed among the offending population, with a relatively small minority of all offenders responsible for the majority of all crimes.[4] Selective incapacitation focuses on the idea that policymakers can prospectively identify the most active offenders prior to their period of peak activity, and prevent a great deal of crime through "selectively" incapacitating these high-risk individuals.[5] Legal scholars sometimes object to the idea of selective incapacitation on the legal or ethical grounds that the policy is at least implicitly "punishing" the offender for future crimes not yet committed, rather than the crime for which the person has been convicted.[6]

Whatever the ethics or legal support for this idea, selective incapacitation also implies that there will be declining marginal returns for incarceration, a least with respect to incapacitation. If society starts by incapacitating the highest-rate and most frequent offenders, additional incarceration will generate reduced benefits from incapacitation as society incarcerates lower-rate, less frequent offenders.[7] A concise way of saying this is that there are inefficiencies of scale—the impact gets smaller the more incarceration a society uses. The incapacitative impact of incarceration is also inherently time-limited. A prison cell can only incapacitate a criminal for the time that he is in prison.

This prison cell might be accomplishing other goals. There are existing theories of sentencing that present unified goals of rehabilitation or retribution.[8] However, most current sentencing regimes represent a relative

3. Serious crimes in prison are included in most measures of reported crime and therefore most modern measures of incapacitation account for serious crimes in prison. However, minor crimes in prison are often handled through administrative mechanisms, and maybe undercounted in official measures of crime. Nevertheless, most researchers assume that the net suppression is positive. For an alternative viewpoint, see Guyora Binder & Ben Notterman, *Penal Incapacitation: A Situationist Critique*, 54 Am. L. Rev. 1 (2017).

4. Alex R. Piquero, David P. Farrington & Alfred Blumstein, *The Criminal Career Paradigm*, 30 Crime & Just. 359 (2003).

5. Peter W. Greenwood & Allan Abrahamse, Selective Incapacitation (1982).

6. Kathleen Auerhahn, *Selective Incapacitation and the Problem of Prediction*, 37 Criminology 703 (1999); Binder & Notterman, *supra* note 3.

7. Anne Morrison Piehl et al., *The Crime-Control Effect of Incarceration: Does Scale Matter?*, 5 Criminology & Pub. Pol'y 245 (2006).

8. *See, e.g.*, Paul H. Robinson & John M. Darley, *The Utility of Desert*, 91 Nw. U. L. Rev. 453 (1997); Norval Morris, The Future of Imprisonment (1974); *see also* Cullen, *supra* note 1.

hodgepodge or muddle of goals, some of which may conflict with one another.[9] This muddle may not be wholly destructive. For example, holistic theories of sentencing which are non-utilitarian, like retribution, routinely acknowledge that these retributive sentences can incidentally (and productively) accomplish utilitarian goals, like incapacitation.[10] From this viewpoint, incapacitation is only problematic if it becomes the central driving force for a sentencing regime.

Although common in the 1980s,[11] it is no longer common to see arguments for incapacitation as the guiding force for a sentencing regime. It is much more common to see arguments for specific non-systemic reforms or policies on the basis of the incapacitation. As a result, this chapter will not discuss incapacitation as a driving force for an entire sentencing regime. This chapter simply asks whether, and to what extent, social science supports the idea that incarceration as a sentence might prevent crime in society. A realistic assessment of the potential incapacitative benefit of incarceration at the margin should help policymakers assess any potential reforms or policy changes that would cause changes in incarceration. The chapter proceeds with a discussion of the existing empirical research that seeks to estimate the magnitude of the incapacitative benefit of incarceration, followed by a discussion about future directions for research and recommendations for policymakers.

I. ESTIMATING THE MAGNITUDE OF INCAPACITATION

There are two basic approaches to the study of incapacitation. The first approach, which Spelman refers to as "bottom up," is derived from criminal-career literature.[12] The criminal-career approach comes from operations research, and involves the use of detailed equations that identify the specific parameters that contribute to an observed offending rate.[13] Factors such as the rate of onset and desistance, along with parameters that capture the intermittency of offending, are also estimated by criminal-career scholars. The second approach, which Spelman refers to as "top down," relies on aggregate data from places to estimate the impact of prison on crime rates.[14]

The bottom-up approach uses estimates of an individual's offending rate to generate simulated estimates of the amount of crime averted by specific imprisonment policies. For example, inmates have been asked while incarcerated

9. Tonry, *supra* note 1.
10. Robinson & Darley, *supra* note 8.
11. Edwin W. Zedlewski, Making Confinement Decisions (1987).
12. William Spelman, *What Recent Studies Do (and Don't) Tell Us about Imprisonment and Crime*, 27 Crime & Just. 419 (2000).
13. Piquero, Farrington & Blumstein, *supra* note 4.
14. Spelman, *supra* note 12.

to describe their offending prior to the current term of incarceration.[15] These responses are then used to generate estimates of the annual amount of crime committed while the person is free, which is then used to generate an estimate of the benefits of a year of incarceration in terms of the number of crimes prevented.

Initially, research using this approach reported extremely high benefits from incapacitation, on the order of almost 200 felony crimes per prisoner year.[16] Almost immediately, scholars identified some serious flaws with this approach.[17] Data on self-reported crimes is highly skewed, with a few offenders reporting a great many crimes. As a result, the average number will grossly overstate the marginal benefit from incarcerating the next person. In addition, these self-reported crimes were occurring right before the person went to prison, arguably the peak (and inflated) period of activity during a person's "criminal career." More recent research has reached a consensus around 15 to 20 felony or Uniform Crime Report Part I crimes (murder and non-negligent homicide, rape, robbery, aggravated assault, burglary, motor vehicle theft, larceny-theft, and arson) per year in prison, on average.[18] However, there is no way of knowing whether a given policy change will incapacitate the average offender, or someone who commits less crime on average.

There is also no way of knowing whether the person placed into prison was simply replaced by someone else who would have otherwise not committed crime. The possibility of replacement is most plausible in the case of drug crimes, where dealers could be replaced by others. The problem of replacement is similar to the problem of displacement in the case of place-based crime prevention. Crime might be reduced in a particular area by increasing police presence, for example, thus making a "crime generating" place less capable of generating crime.[19] But if criminals simply go to another place, their crimes may be displaced to the new area and overall crime rates may not be reduced by this policy. By the same token, crime is not reduced by incapacitation if a person is incarcerated and is promptly replaced by another individual who now commits the same crimes the other person would have committed absent incarceration. It is difficult to identify the extent of replacement empirically.[20]

15. Zedlewski, *supra* note 11.
16. *Id.*
17. Franklin E. Zimring & Gordon Hawkins, *The New Mathematics of Imprisonment*, 35 Crime & Delinq. 169 (1988).
18. Alex R. Piquero & Alfred Blumstein, *Does Incapacitation Reduce Crime?*, 23 J. Quantitative Criminology 267 (2007).
19. David Weisburd et al., *Does Crime Just Move Around the Corner? A Controlled Study of Spatial Displacement and Diffusion of Crime Control Benefits*, 44 Criminology 549 (2006).
20. Binder & Notterman, *supra* note 3.

The "top down" approach gets around the problem of replacement by focusing on the total amount of crime committed in a place rather than on the crime committed (or not committed) by a particular person. A change in the number of crimes committed in a certain place that can be directly tied to changes in the number of people in prison will generate an estimate of the incapacitation effect that is net of replacement. While this approach has the twin advantages of controlling for replacement while linking policy directly to the outcome of interest, it also faces numerous empirical challenges. Places with higher crime rates also tend to put more people in prison. Failure to account for this problem will lead to estimates of the incapacitation effect that are too low. Attempts to causally identify the impact of prison on crime must therefore break this link by identifying variation in the incarceration rate that is independent of the crime rate. This independent variation is called exogenous variation by social scientists. Experiments can cause this exogenous variation, although it is hard to create experimental variation in incarceration.

"Natural" experiments can also create exogenous variation. For example, Steve Levitt observed that some states in the U.S. were forced by the courts to reduce their incarceration levels due to charges of overcrowding.[21] Initially, at least, states under court sanction could meet this mandate only by releasing prisoners. Likewise, the Italian government routinely releases up to 35% of its prison population through periodic "collective pardons."[22] This pardon process creates variation in the incarceration rate over time and in different places, because the pardons release varying amounts of prisoners to each Italian region. These two studies generated similar estimates of 15 to 20 felony crimes prevented per year in prison. It is interesting that this number aligns well with the individual estimates from the "bottom up" approach.

In a similar way, Lofstrom and Raphael used county-level variation caused by California's Public Safety Realignment Act (Realignment), a 2011 law designed to reduce prison overcrowding in response to a court order.[23] I have argued that Realignment is roughly comparable to the policy change observed by Levitt.[24]

21. Steven D. Levitt, *The Effect of Prison Population Size on Crime Rates: Evidence from Prison Overcrowding Litigation*, 111 Q.J. Econ. 319 (1996).

22. Alessandro Barbarino & Giovanni Mastrobuonie, *The Incapacitation Effect of Incarceration: Evidence from Several Italian Collective Pardons*, 6 Am. Econ. J. 1 (2014).

23. Magnus Lofstrom & Steven Raphael, *Incarceration and Crime: Evidence from California's Public Safety Realignment Reform*, 664 Annals Am. Acad. Pol. & Soc. Sci. 196 (2016).

24. Shawn D. Bushway, *Evaluating Realignment: What Do We Learn About the Impact of Incarceration on Crime?*, 15 Criminology & Pub. Pol'y 309 (2016); *see also* Levitt, *supra* note 21.

Lofstrom and Raphael found point estimates that are roughly one-tenth the magnitude of the earlier estimates (half the size in elasticity terms), although a lack of precision cannot completely rule out much larger estimates.[25]

Johnson and Raphael provided some insight into the disparity between these estimates with a panel analysis of 50 states and the District of Columbia from 1978 to 2004, a period of increasing incarceration.[26] Their instrument relied on their estimate for the permanent (as opposed to the transitory) change in incarceration. Johnson and Rucker provided estimates from 1978 to 1990 that were very consistent with the Levitt results. However, they found smaller numbers (about two crimes a year) for the most recent period (1992-2004), which is consistent with the fact that not all potential incarcerants offend at the same rate. As incarceration rates increased in the United States, it is reasonable that the offending rate of the marginal incarcerants decreases.[27] Raphael and Stoll replicated this analysis for U.S. states from 2000 to 2010, and again reported lower estimates during this period of higher incarceration, estimates that are similar to the results from the Loftstrom and Raphael realignment study.[28]

Of course, we need not focus solely on the overall rates of incarceration, given that the policies can focus on specific types of offenders. Ben Vollaard studied the "habitual offender" policy in the Netherlands, which incarcerated very high-rate property offenders for one to two years.[29] Vollaard's estimates are huge, suggesting that the policy prevents over 50 reported crimes per year of prison for one person. This very large effect size is plausible because of the policy's laser focus on very high-rate habitual offenders in a country with a very low incarceration rate. The average offender sentenced under the law had 31 prior convictions, almost all for minor property offenses. The policy is implemented only as a last resort, after the person has shown no response to treatment. Vollaard also showed that the size of the incapacitation effect declines with increased use—a result that is consistent with the idea of declining marginal returns from incapacitation.

Because the "top down" approach is at the aggregate level, not the individual level, the actual characteristics of those for whom the effect is largest is hard to estimate. Indeed, the main advantage of the first, "bottom up" approach is that

25. *See* Bushway, *Evaluating Realignment*, *supra* note 24.

26. Rucker Johnson & Steven Raphael, *How Much Crime Reduction Does the Marginal Prisoner Buy?*, 55 J.L. & Econ. 275 (2012).

27. Piehl et al., *supra* note 7.

28. Steven Raphael & Michael A. Stoll, The Hamilton Project: Brookings Inst., A New Approach to Reducing Incarceration while Maintaining Low Rates of Crime (2014); *see also* Lofstrom & Raphael, *supra* note 23.

29. Ben Vollaard, *Preventing Crime through Selective Incapacitation*, 123 Econ. J. 262 (2013).

it uses data from individuals, and allows researchers to estimate a distribution of benefits from incapacitation. The main advantage of the second, "top down" approach is that it provides a useful counterfactual, comparing the crime-control effects of two different policies that can be described substantively. However, it can only hint at variation in incapacitation effects because the estimates are for places, not people. More broadly, but for the same reasons, this approach cannot prove that the effects estimated from this approach are due only to incapacitation.

In each of the aggregate papers, the deterrent threat of incarceration has also changed as has the potential for specific deterrence and rehabilitation. For example, an individual contemplating crime in a state with a court-imposed cap on incarceration might plausibly assume that his chance of incarceration is less if he was to commit a crime. Individuals who are part of collective pardons might not be able to complete rehabilitation programs, or might decide that incarceration is not as bad as they had previously thought, and therefore commit more crimes than they would have without the collective pardon. While Vollaard argued that the observed impact in the Netherlands was due to the incapacitation of chronic drug-addicted offenders who were no longer "deterrable" or amenable to treatment, he also acknowledged that it is still at least possible that there was also deterrent value to the statute. Evaluations of three-strike laws in the U.S. using individual-level data have plausibly identified deterrence for individuals exposed to the risk of the third strike.[30]

Kessler and Levitt attempted to differentiate between incapacitative effects and deterrent effects by looking at the timing of effects on crime.[31] For example, three-strikes laws impose long prison sentences for multiple or repeat offenders. These individuals would have been incarcerated even without the three-strike provisions: the difference is that they may now have a 10- or 15-year sentence instead of a 5-year sentence. As a result, there will be no additional incapacitative benefit to these particular laws in the short run. An immediate change in the crime rates after the implementation of the law can then be plausibly considered to be a deterrent rather than an incapacitative effect. Long-term effects can be plausibly attributed to both deterrence and incapacitation. They find both short-term and long-term effects, suggesting evidence for both incapacitation and deterrence.

30. Eric Helland & Alexander Tabarrok, *Does Three Strikes Deter? A Nonparametric Estimation*, 42 J. Hum. Resources 309 (2007).

31. Daniel Kessler & Steven D. Levitt, *Using Sentence Enhancements to Distinguish between Deterrence and Incapacitation*, 42 J.L. & Econ. 343 (1999).

Miles and Ludwig argued that reliable and valid estimates of incapacitation are too difficult to obtain, and that time would be better spent generating estimates of the aggregate effects of prison using natural experiments.[32] Although these aggregate measures would not enable the researcher to isolate the mechanism by which crime declined, it would give policymakers clear guidance with which to conduct cost-benefit analyses of prison. In a cost-benefit analyses, the costs of incarceration are compared with the monetized benefits of preventing a certain numbers of crimes. The monetary costs of crime are generated using direct accounting methods, compensatory damages from civil lawsuits, and methods that attempt to put an estimate on individuals' willingness to pay to avoid victimization. From the perspective of Miles and Ludwig, generating a clean estimate of the crime-reducing benefits of a policy would then provide room to concentrate on generating good estimates of the costs and benefits of such a policy. Whether the effect of incarceration was due to incapacitation or deterrence or some other process would be both unknown and irrelevant.

The logic of this argument is compelling—ultimately, what policymakers need to know is the treatment effect of incarceration. The fact that incarceration can reduce crime through multiple mechanisms is interesting, but not particularly important if the policy choice involves more or less incarceration. However, once policymakers start thinking about the nature of the incarceration experience, the mechanisms become important. Mueller-Smith has found compelling evidence that the spell of incarceration increases the offending rate of an individual after he is released from jail in Harris County, Texas.[33] Bhuller et al. found evidence of exactly the opposite effect for individuals who have served time in Norway.[34] It almost goes without saying that Norway has radically different incarceration practices than the jail system in Harris County, Texas. Both studies found evidence of incapacitation. Without breaking down the treatment impact of incarceration into its component parts, policymakers will have little insight into how they can improve upon standard practice.

Fortunately, researchers have begun to develop a new, third approach to estimate the separate incapacitative benefit of incarceration. This new approach relies on individual-level data, like the bottom-up approach, but, as

32. Thomas J. Miles & Jens Ludwig, *The Silence of the Lambdas: Deterring Incapacitation Research*, 23 J. Quantitative Res. 287 (2007).

33. Michael Mueller-Smith, The Criminal and Labor Market Impacts of Incarceration (Aug. 18, 2015) (unpublished manuscript).

34. Manudeep Bhuller et al., Incarceration, Recidivism, and Employment (Nat'l Bureau of Econ. Research Working Paper No. 22648, 2016).

in the top-down approach, the researcher creates a useful counterfactual using other observations in the data. The rate of offending generated by the non-incarceration counterfactual becomes the best estimate of the amount of crime prevented through the incarceration of the first individual. The main drawback to this approach is that the focus on individuals means that the approach cannot account for replacement crimes committed by other people. The main attraction of this latter approach is that it does not force the researchers to assume that individuals who are not incarcerated will necessarily look like those who are. Rather, individuals are explicitly identified as comparable on the basis of their observed offending behavior and other characteristics.

In the first example of this approach, Sweeten and Apel studied the self-reported offending of a group of individuals in a contemporary U.S. sample.[35] In contrast to most prior research, they did not generate estimates by relying on the reports of offending before incarceration by the same respondents. Rather, they relied on self-reported data from a matched control group (using propensity scoring) of other people who are otherwise similar but not incarcerated. The matching approach controls for observable differences between those who are incarcerated and those who are not. Their approach has the merit of being tied to a specific change in imprisonment policy, namely increasing the numbers who are given prison as a punishment as opposed to extending the lengths of those currently incarcerated. They find estimates of around 10 crimes a year, slightly lower than the estimates from Levitt.[36]

Their approach has been replicated at least twice, both in the Netherlands. Wermink et al. studied a group of first-time incarcerants using the matching approach of Sweeten and Apel.[37] They found a year of prison prevents about two crimes, a number that is very similar to the estimates from the most recent panel studies in the U.S. Although Dutch incarceration rates are much lower than U.S. rates, the focus on first-time prisoners might account for this lower rate of crimes for the control group.

The second Dutch study, by Tollenaar et al., addressed this issue by focusing on the high frequency offenders incarcerated under the program studied by

35. Gary Sweeten & Robert Apel, *Incapacitation: Revisiting an Old Question with a New Method and New Data*, 23 J. Quantitative Criminology 303 (2007).

36. One possible shortcoming of this approach is that it does not consider the possibility of replacement. This idea is particularly salient for market-driven crimes such as drug dealing. The aggregate analyses should generate estimates net of replacement—the individual estimates will not. The fact that the individual estimates are almost universally lower than the aggregate estimates suggests that the replacement effects are not a major problem.

37. Hilde Wermink et al., *The Incapacitation Effect of First-Time Imprisonment: A Matched Samples Comparison*, 29 J. Quantitative Criminology 579 (2013).

Vollaard.[38] They found estimates of around four crimes a year, which is double that of Wermink et al., but much lower than the estimates from Vollaard. One possible explanation is that Vollaard studied an earlier, more restrictive version of the program that was particularly targeted. Another possibility, supported by additional analysis by Tollenaar et al., is that the programs under study also affected behavior after release—so, as suggested earlier, Vollaard's estimates might have included more than just incapacitation effects.

One problem with this matching approach is that it controls only for observable differences. Emily Owens fashioned an identification strategy that should control for both unobserved and observed differences between those who are incarcerated and those who are not.[39] It also fits nicely between the two approaches, because she uses individual-level data and a natural experiment to estimate the causal effect of incapacitation for a subsample of people affected by the policy. She takes advantage of a technical change in Maryland sentencing guidelines that had a substantial effect on the sentence for a subset of sentenced offenders.

The change involved the use of juvenile records in sentencing decisions. Until 2001, these records were included in the criminal history of all individuals up to the age of 25; after 2001, the age for which juvenile histories counted was lowered to 22. Thus some of those aged 23-25 received shorter sentences than they would have received in the earlier years. Owens estimates that this reduced the average sentence under the Maryland guidelines system by about 25% (about 9 to 18 months). She also found that, during this time period when they were at liberty because of the change in rules, youths sentenced after 2001 were arrested on average 2.5 times per year. Taking account of the specific offenses for which they were arrested, and the ratio of recorded arrests to recorded offenses of the same type, she estimates that they were responsible for 1.5 index crimes per year. This provides a relatively precise estimate of their recorded criminal activity during a period when they would have been incarcerated under the previous rules. Like the Dutch estimates, the estimate that Owens develops of crimes averted is smaller by an order of magnitude than the Levitt estimate of 15 to 20 crimes previously cited in the literature.

Two other recent studies have followed Owens in using exogenous variation to compare those in prison to otherwise similar people on probation or parole. Mueller-Smith and Bhuller et al. use random assignment to judges to identify

38. N. Tollenaar et al., *Effectiveness of a Prolonged Incarceration and Rehabilitation Measure for High-Frequency Offenders*, 10 J. Experimental Criminology 29 (2014).

39. Emily G. Owens, *More Time, Less Crime? Estimating the Incapacitative Effect of Sentence Enhancements*, 52 J.L. & Econ. 551 (2009).

the impact of prison vs. probation.[40] Some judges sentence offenders more harshly than others, so random assignment to judges creates a situation where some offenders get exogenously determined prison rather than probation. As in the Owens study, the offending of the individuals with probation can be used to estimate the incapacitative benefit from prison during the time that the individual would have otherwise been in prison.

The incapacitative impacts of incarceration have at times been ignored by criminologists who focus solely on the differences in recidivism for those assigned to prison versus those who are assigned probation, essentially starting the clock at release rather than from sentencing. Clearly, this ignores one of the potential benefits from incarceration. Mueller-Smith, who studied Harris County Texas, and Bhuller et al., who studied Norway, find modest benefits from incapacitation that are more similar to Owens than Levitt.[41]

Of course, incapacitation is not the only consequence of incarceration. Mueller-Smith found that incarceration actually increases offending after release,[42] while Bhuller et al. found that incarceration decreases offending after release relative to probation.[43] Obviously, Harris County and Norway are very different places with very different correctional philosophies. But, the difference in estimates after incarceration point to the importance of remembering that incapacitation is only one of the potential consequences of incarceration.

The possibility exists that these effects could be much bigger for targeted policies focusing on high-rate offenders. Of course, the reality is that only a few people commit crime at a high rate. In the Netherlands, a country of 16 million, only 4,000 people are even eligible for the habitual-offender label in a given year, and even fewer actually receive the penalty. Nevertheless, Vollaard showed that Dutch cities that used the habitual-offender law more liberally also had smaller crime reduction per prison year,[44] and Tollenaar et al. found much smaller estimates for the Dutch law that widened the scope of the original habitual-offender law.[45] The reality of a strong positive skew is impossible to avoid—the only way to incarcerate more people is to incarcerate offenders who commit fewer crimes. This leads inevitably to diminishing marginal returns from increased incarceration. In the U.S., which has seen a four-fold increase in the incarceration rate over the last 40 years, researcher after researcher has

40. Mueller-Smith, *supra* note 34; Bhuller et al., *supra* note 35.
41. Mueller-Smith, *supra* note 34; Bhuller et al., *supra* note 35.
42. Mueller-Smith, *supra* note 34.
43. Bhuller et al., *supra* note 35.
44. Vollaard, *supra* note 30.
45. Tollenaar et al., *supra* note 39.

shown that the impact of incarceration on crime has declined during this period.[46] Incarceration incapacitates, but large effect sizes are not scalable.

II. SELECTIVE INCAPACITATION

In the Netherlands, the habitual-offender statute was used as an option of last resort for an offender with at least 10 felony offenses. As a result, individuals are incapacitated only after they have revealed through their own behavior that they are indeed prolific. However, it is tempting to avoid waiting until someone has committed so many offenses before identifying them as a high-rate offender. Imagine how many crimes could have been prevented in the Netherlands if these individuals could have been identified and incapacitated *before* they were convicted more than 31 times.

Prospectively identifying high-rate offenders, selective incapacitation, holds out this tantalizing prospect of dramatic reductions in crime. It also carries with it some ethical ambiguity, since individuals are essentially being incarcerated for crimes they have not yet committed.[47] In addition, since the prediction is probabilistic, there will be prediction errors, most notably false positives. False positives are people identified as high-rate offenders who would have stopped without any additional intervention. Because of this concern about false positives, the debate about selective incapacitation can become quite heated.[48]

A reasonable read of the now large literature on identifying chronic offending and recidivism might conclude that criminologists can prospectively identify high-rate offenders with fewer errors than if they were guessing.[49] It is also true that the accuracy is far from perfect.[50] The open question is not whether criminologists can predict risk—they can[51]—but whether the accuracy is good

46. *E.g.*, Piehl et al., *supra* note 7.
47. Binder & Notterman, *supra* note 3.
48. Auerhahn, *supra* note 6.
49. D.A. Andrews et al., *The Recent Past and Near Future of Risk and/or Need Assessment*, 52 Crime & Delinq. 1 (2006); Richard Berk, Criminal Justice Forecasts of Risk: A Machine Learning Approach (2012); Prediction and Criminology (David P. Farrington & Roger Tarling eds., 1985); N. Tollenaar & P. van der Heijden, *Which Method Predicts Recidivism Best? A Comparison of Statistical, Machine Learning and Data Mining Predictive Models*, 176 J. Royal Stat. Soc'y 565 (2013).
50. Stephen D. Gottfredson & Don M. Gottfredson, *Behavioral Prediction and the Problem of Incapacitation*, 32 Criminology 441 (1994).
51. *See* John Monahan, "Risk Assessment in Sentencing," in the present Volume.

enough to create benefits that outweigh not only the costs of incarcerating the accurately identified high-risk offenders, but also the costs generated by incarcerating the false positives.[52]

There may also be structural or institutional limits to the ability of researchers to prospectively identify high-risk offenders in the current environment.[53] Empirical models require data on individuals followed over many years to validate risk-prediction models.[54] This is not a big problem in places like the Netherlands, since even the prolific offenders in the Netherlands who were subject to the habitual-offender law had spent very little time in prison prior to receiving the sentence enhancement. However, in the U.S., these people would have been incarcerated for substantial periods of time, drastically reducing the amount of time in which their behavior could have been observed. As a result, it would have taken them longer to accumulate the same number of offenses, and prolific offenders will be less obvious in the U.S. than they will be in the Netherlands.

Analysis of selective incapacitation policies is also complicated by the fact that incarceration and criminal justice actions may affect the offending of the incarcerated individuals through specific deterrence, stigmatization, or incapacitation. And these treatments are being assigned in a non-random way to the convicted population. In this context, in which a regime is already trying to implement a treatment, Jeffrey Smith and I have made it clear that it is hard to evaluate the impact of any variable on subsequent offending without an explicit model of what the criminal justice actors are already trying to accomplish.[55] Almost all risk-prediction models focus on recidivism after release—but the person doing the sentencing presumably cares about the behavior of the individual from the time of sentencing, which would include incapacitation. But, if incapacitation is ignored or not modeled, we will not get a true measure of risk.

To the extent we know what the actors are trying to do, we can more easily interpret the causal impacts of the various actions. Such information is often not available, and we need to make strong assumptions to make much progress

52. Richard Berk, *Asymmetric Loss Functions for Forecasting in Criminal Justice Settings*, 27 J. Quantitative Criminology 107 (2011) [hereinafter Berk, *Asymmetric Loss Functions*]; Richard Berk, *Balancing the Costs of Forecasting Errors in Parole Decisions*, 74 Alb. L. Rev. 1071 (2011) [hereinafter Berk, *Balancing the Costs*].

53. Stephen D. Gottfredson & Laura J. Moriarty, *Statistical Risk Assessment: Old Problems and New Applications*, 52 Crime & Delinq. 178 (2006).

54. Elaine P. Eggleston et al., *Methodological Sensitivities to Latent Class Analysis of Long-term Criminal Trajectories*, 20 J. Quantitative Criminology 1 (2004).

55. Shawn Bushway & Jeffrey Smith, *Sentencing Using Statistical Treatment Rules: What We Don't Know Can Hurt Us*, 23 J. Quantitative Criminology 377 (2007).

on the question of risk assessment and selective incapacitation, particularly for those offenders who are heavily involved in the criminal justice system—the highest-risk offenders. While there is substantial literature on risk prediction,[56] very little of this research takes this problem—that the decisions are endogenous with respect to the risk—into account. In light of that fact, researchers and policymakers should be aware that the endogeneity of treatments (with respect to risk) understates the power of risk-prediction models by suppressing the true unobserved risk of the person through treatment, including incapacitation.[57]

Despite the presence of these challenges and ethical concerns,[58] the use of risk prediction in the U.S. criminal justice system—for sentencing, correctional placement, probation supervision and parole release—has exploded and shows no sign of abating.[59] Although not all risk prediction is used for selective incapacitation, many of the explicit goals of the Risk, Needs, and Responsivity (RNR) model that now dominates the risk-prediction field are at least consistent with selective incapacitation.[60] For example, a central tenet of the RNR approach is the identification of low-risk offenders who will not offend even without treatment or supervision. This is selective incapacitation at the other end of the distribution—why incarcerate or otherwise restrict people who are at low risk for offending.[61] The logic of selective incapacitation is the same whether the focus is identifying high-rate or low-rate offenders. It is also far more attractive, and potentially easier, to identify the larger group of low-risk people than it is to identify the small group of high-risk people. In an era when policymakers are seeking to reduce incarceration, using risk tools to identify the lowest-risk individuals to release so as to minimize potential crime increases makes good sense.[62]

III. INCAPACITATION OUTSIDE THE CONTEXT OF INCARCERATION

The logic of incapacitation need not be limited to the policy of incarceration. For example, research in economics has considered the incapacitative impact of school, which keeps youths out of the community and potentially reduces

56. *See* Monahan, *supra* note 52.
57. Matthew Kleiman et al., *Using Risk Assessment to Inform Sentencing Decisions for Nonviolent Offenders in Virginia*, 53 Crime & Delinq. 106 (2007).
58. Kelly Hannah-Moffat, *Actuarial Sentencing: An "Unsettled" Proposition*, 30 Just. Q. 270 (2013).
59. John Monahan, *A Jurisprudence of Risk Assessment: Forecasting Harm Among Prisoners, Predators, and Patients*, 92 Va. L. Rev. 391 (2006).
60. Andrews et al., *supra* note 50.
61. Auerhahn, *supra* note 6.
62. Kleiman et al., *supra* note 58.

property crime,[63] and of bad weather, which keeps people off the streets.[64] It is also possible to talk about the incapacitation effect of police and even probation officers, who can detain and otherwise obstruct individuals from committing crime by their presence and actions. House arrest and electronic monitoring, which has become increasingly common in the U.S., may serve as a deterrent, but may also incapacitate people by making it more difficult to engage in criminal behavior. New monitoring policies that require individuals to check in daily for drug and alcohol tests may incapacitate offenders by requiring certain behavior (showing up for Breathalyzer tests) when they would otherwise be drinking.

These alternative forms of incapacitation might not be as complete as imprisonment, but they may also not carry with them the costs associated with concentrating large numbers of offenders in a prison. The costs of creating such potentially violent environments are not typically considered in the average incapacitation study, which focuses only on crimes in the community. In contrast, evaluations of alternative forms of incapacitation do consider the crimes that are committed while under supervision. For example, evaluations of electronic monitoring compare the behavior of people with the monitors to the behavior of people without monitors. No assumption is made that people with monitoring do not commit crime. A realistic appraisal of these new forms of incapacitation starts with a clear understanding of how an environment affects the behavior of the person in the current moment, even if the primary goal of the new environment (e.g., community supervision) is not necessarily incapacitation.

RECOMMENDATIONS

Incapacitation is one real consequence of incarceration. People who are incarcerated do not commit as many crimes as they would have, absent incarceration. This appears to result in a real decline in the number of crimes experienced outside of prison. Although replacement is possible, there is no convincing evidence that the crimes averted by incarceration are simply replaced by the next available potential criminal. The best modern estimates for the size of the effect are modest, in the neighborhood of two to five serious crimes per year. These effects are larger if incarceration is used in a more targeted way for higher-rate offenders, but will inevitably decline as incarceration is used more heavily. The research in this area supports some basic recommendations for policy.

63. Brian A. Jacob & Lars Lefgren, *Are Idle Hands the Devil's Workshop? Incapacitation, Concentration and Juvenile Crime*, 93 Am. Econ. Rev. 1560 (2003).

64. Brian A. Jacob, Lars Lefgren & Enrico Moretti, *The Dynamics of Criminal Behavior: Evidence from Weather Shocks*, 42 J. Hum. Resources 489 (2007).

1. **Incapacitation should not be relied on as a primary motivation for a broad-based incarceration regime.** Although incapacitation is real, and there will be some modest decrease in crime associated with most incarceration, incapacitation as an idea is not sufficiently robust to motivate and sustain a systematic sentencing regime. Serious legitimate questions exist about the ethics of selective incapacitation as a primary motive for sentencing.[65]

2. **Incapacitation cannot be used to justify the current levels of incarceration in the United States.** The offender population has a distinct distribution with respect to offending rates. This distribution is skewed, with a few high-rate offenders accounting for the majority of the offenses.[66] Most incarceration policies, even one that assigns every crime the same probability of a prison sentence, will selectively incarcerate the higher-rate offenders.[67] However, the nature of the offender distribution means that increased incarceration will have diminished returns to scale in terms of incapacitative benefit. The evidence is clear-cut that current high levels of incarceration have captured a wide swath of the offender population, including those that offend at a low rate. In real terms, this means that the average benefit to a prison cell in terms of crimes prevented has dropped at least in half since the 1970s, and probably more. Simply put, the benefits from incapacitation cannot support the current levels of incarceration in the U.S., even if a person was to believe that incapacitation was the proper (and only) goal of sentencing.

3. **"Release valve" policies to reduce the prison population in the short term should focus on releasing individuals who are at lowest risk for offending.** Not all prison-reduction policies will have the same costs in terms of increased crime due to reduced incapacitation. Higher-risk people have some observable characteristics that can be used to reliably identify higher rates of offending. Most notably, age and number of prior offenses are good predictors of future crime.[68] Type of crime, despite heightened concerns about violent offenders, is not a good predictor of future crime.[69] Although incapacitation should not drive incarceration policy more

65. Binder & Notterman, *supra* note 3.

66. Marvin E. Wolfgang et al., Delinquency in a Birth Cohort (1972); Piquero, Farrington & Blumstein, *supra* note 4.

67. Piquero & Blumstein, *supra* note 18.

68. Paul Gendreau et al., *A Meta-Analysis of the Predictors of Adult Offender Recidivism: What Works!*, 34 Criminology 575 (1996).

69. *Id.*; Patrick A. Langan & David J. Levin, Bureau of Justice Statistics, U.S. Dep't of Justice, Recidivism of Prisoners Released in 1994 (2002).

broadly, evidence about the size of the incapacitative benefit should play a role in one-time "release valve" decisions to release prisoners. Such considerations would result in more releases of older offenders, even those who are serving long sentences for serious crimes. More broadly, crime control (or incapacitation) should not be used as an explanation or defense for long, determinate prison sentences, such as life without parole.[70]

4. **Policymakers should be aware of the relative incapacitative effects of different policies, even if their main motives do not include incapacitation.** Retribution requires longer periods of incarceration for violent offenses. This policy might have demonstrably lower crime-reduction benefits than a policy that focuses shorter prison sentences on young, high-rate property offenders. Retribution scholars might legitimately not care about this potential differential impact. Nonetheless, these effects are real, and should inform the policy decisions about the use of incarceration in real-life situations. Risk-assessment tools can play a role in helping identify the relative rates of offending for individuals involved in the criminal justice system. Care should be taken to accurately assess the relative costs of different kinds of errors[71] and the impact of current practice on observed risk.[72] Care should also be taken to make use of tools that can mitigate the potential for these tools to have a racially disparate impact.[73]

5. **In certain specific cases, crime can be reduced in places through the use of limited short-term spells of incarceration to incapacitate very high-rate property offenders.** The Dutch experience with the limited use of short spells of incarceration aimed at very high-rate property offenders has demonstrated that targeted incarceration policies can be used selectively to reduce crime.[74] These policies almost inevitably rely on deterrence and even rehabilitation of those same offenders to achieve the full benefit of incarceration. Moreover, the Dutch experience has also highlighted the very real (and costly) potential trap of these policies—initial success almost inevitably leads to increased use—and rapidly declining benefit. This kind of targeted use of relatively short periods of incarceration for high-rate property offenders should not be confused with the types of

70. *See generally* Erik Luna, "Mandatory Minimums," in the present Volume.
71. Berk, *Asymmetric Loss Functions*, *supra* note 53; Berk, *Balancing the Costs*, *supra* note 53.
72. Bushway & Smith, *supra* note 56; Eggleston et al., *supra* note 55.
73. Devin G. Pope & Justin R. Sydnor, *Implementing Anti-Discrimination Policies in Statistical Profiling Models*, 3 Am. Econ. J. 206 (2011).
74. Vollaard, *supra* note 30.

"three strikes and you are out" policies popularized in the United States. Although there is some evidence of deterrence from three-strikes policies,[75] their incapacitative benefit has not been proven, especially since the added incarceration of these policies is likely to occur many years after the individuals have exited crime. Long terms of incarceration, particularly life sentences without parole, cannot be justified through incapacitation.

75. Helland & Tabarrok, *supra* note 31.