UNDERSTANDING VIOLENT-CRIME RECIDIVISM

*J.J. Prescott, Benjamin Pyle & Sonja B. Starr**

People convicted of violent crimes constitute a majority of the imprisoned population but are generally ignored by existing policies aimed at reducing mass incarceration. Serious efforts to shrink the large footprint of the prison system will need to recognize this fact. This point is especially pressing at the time of this writing, as states and the federal system consider large-scale prison releases motivated by the COVID-19 pandemic. Those convicted of violent crimes constitute a large majority of older prisoners, who are extremely vulnerable to the spread of the virus behind bars. Excluding them from protective measures will deeply undermine those measures' effectiveness—and yet many governors and officials have hesitated due to fears of violent-crime recidivism. In addition, the population imprisoned for violent offenses also exhibits sharper demographic disparities than the general prison population across both age and race. Consequently, reforms that target those convicted only of nonviolent crimes will likely exacerbate existing inequalities in the criminal justice system. In this Article, we start from the premise that better understanding individuals convicted of violent crimes is essential to overcoming resistance to the idea of releasing them earlier—and in particular, to address the fear that this population will almost certainly reoffend violently. We review existing studies and offer new empirical analysis to inform these questions. Although estimates vary, our synthesis of the available evidence suggests that released violent offenders, especially homicide offenders who are older at release, have lower overall recidivism rates relative to other released offenders. At the same time, people released after previous homicide convictions may be more likely to commit new homicides than otherwise comparable releasees, although probably not by as much as most would expect.

INTRODUCTION

Much of the conversation about reducing mass incarceration has focused on reducing incarceration levels for nonviolent offenders.[1] This conversation is undoubtedly an important one, but reform will need to extend to the incarceration of violent offenders if the United States hopes to

© 2020 J.J. Prescott, Benjamin Pyle & Sonja B. Starr. Individuals and nonprofit institutions may reproduce and distribute copies of this Article in any format at or below cost, for educational purposes, so long as each copy identifies the authors, provides a citation to the *Notre Dame Law Review*, and includes this provision in the copyright notice.

* University of Michigan Law School.

1 *See, e.g.*, CELINDA FRANCO, CONG. RES. SERV., R41448, DRUG COURTS: BACKGROUND, EFFECTIVENESS, AND POLICY ISSUES FOR CONGRESS 2 (2010) (discussing the importance of drug courts for reducing incarceration and explaining that "[m]ost drug court programs are focused upon low-level, nonviolent offenders"); DENNIS SCHRANTZ ET AL., SENTENCING PROJECT, DECARCERATION STRATEGIES: HOW 5 STATES ACHIEVED SUBSTANTIAL PRISON POPULATION REDUCTIONS (2018) (examining a range of states that modified their sentencing policies for nonviolent offenders to reduce the scope of incarceration); *see also* sources cited *infra* note 20.

substantially reduce the large footprint of its prisons.[2] When weighing the costs and benefits of various decarceration reforms, policymakers will need to consider certain empirical questions. For example, to what extent do violent offenders represent a risk to public safety upon their release? Does any such risk vary with an individual's crime of conviction, with the length of the individual's term of incarceration, or with other observable demographic or crime characteristics? How does this public-safety risk change as individuals age? These questions have long been important, and will remain so, in ongoing debates about decarceration generally. Just before publication of this Article, a newly urgent reason to consider them has arisen, as prison systems consider large-scale releases to protect prisoners, staff, and surrounding communities from the COVID-19 pandemic.

This Article aims to clarify the importance of these questions by collecting and examining what we know about the rates at which individuals commit *another* violent offense after their release from incarceration for having committed earlier violent crimes. We investigate both the frequency and nature of postincarceration violent-crime recidivism, paying particular attention to the behavior of those previously incarcerated for homicide. From a decarceration perspective, this specific population is an important one to understand: although it is a relatively rare crime,[3] homicide results in long prison sentences. Accordingly, individuals convicted of homicide constitute a substantial share (around 14%) of the incarcerated population in the United States, and an even larger share of older prisoners.[4] At least one important reason for the significant length of homicide sentences is fear that those who have killed before will eventually kill again.[5] As we debate how

2 *See* JAMES AUSTIN ET AL., SQUARE ONE PROJECT, RECONSIDERING THE "VIOLENT OFFENDER" 2 (2019) (explaining that over 55% of prisoners are imprisoned for violent offenses); Ryan King et al., *Reducing Mass Incarceration Requires Far-Reaching Reforms*, URB. INST., https://apps.urban.org/features/reducing-mass-incarceration (last visited Mar. 4, 2020) ("About 1 in 6 people in state prison is incarcerated for a drug conviction, and far fewer are incarcerated for low-level drug offenses, such as possession. Even if every person in state prison for a drug offense were released today, mass incarceration would persist.").

3 *Violent Crime*, FED. BUREAU INVESTIGATION, https://ucr.fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/topic-pages/violent-crime (last visited Mar. 4, 2020) (reporting that homicide made up just 1.3% of violent crime in the United States in 2018).

4 *See* E. ANN CARSON & WILLIAM J. SABOL, BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, AGING OF THE STATE PRISON POPULATION, 1993–2013, at 12 (2016), https://bjs.gov/content/pub/pdf/aspp9313.pdf ("[T]he proportion of prisoners age 55 or older who were sentenced for murder or nonnegligent manslaughter increased, from 7% in 1993 to 16% in 2013."); Wendy Sawyer & Peter Wagner, *Mass Incarceration: The Whole Pie 2019*, PRISON POL'Y INITIATIVE (Mar. 19, 2019), https://www.prisonpolicy.org/reports/pie2019.html (showing that individuals convicted of murder make up 13.7% of state prisoners).

5 Jacqueline Cohen, *Incapacitation as a Strategy for Crime Control: Possibilities and Pitfalls*, 5 CRIME & JUST. 1, 2 (1983) ("Incapacitation involves denying an offender the opportunity or ability to commit future crimes. In recent years, there has been growing interest in incapacitation as a strategy for controlling crime. The logic is simple: an offender who is locked up cannot commit crimes in the community."); Rupert Taylor, *Dangerous Repeat*

best to reduce the social costs of incarceration policies, it matters whether this popular belief is actually true.

We find that existing data and analysis present a noisy and often inconsistent picture about whether homicide "same-crime" recidivism is common. Still, the general pattern suggests that, compared to the reoffense rates of individuals released following incarceration for nonviolent crimes, overall recidivism rates are lower among released individuals who have been incarcerated for homicide offenses. On the other hand, violent-crime recidivism rates appear to be higher among this group, and homicide rates are also higher among those previously incarcerated for homicide (although very low in absolute terms). Therefore, while not presenting an entirely clear picture, research does intimate that individuals who have committed prior serious violent offenses reoffend less frequently on the whole, but, when they do, their new offenses may be more likely to be serious.

This Article makes two contributions to existing research on recidivism. First, we provide a detailed, critical overview of previous studies on violent-crime recidivism and an assessment of what can be reliably gleaned from them, given that there are important differences in their approaches and, sometimes, in their conclusions. Second, we carry out an original analysis using a large national longitudinal dataset not yet tapped for this type of research—the National Corrections Reporting Program (NCRP).[6]

With NCRP data, we can conduct statistically meaningful analysis of individuals released from prison ("releasees") with prior homicide convictions, including analysis of the rate at which they are reimprisoned for homicide offenses at some later point. We also use these data to assess the importance of other key characteristics—such as age and time served—in predicting homicide recidivism (as well as other forms of recidivism) among those with prior homicides (as well as other releasees). In part, we report these results in the form of detailed summary statistics broken down by subpopulations. But unlike prior research, we go beyond summary statistics, offering regression analysis that estimates the predictive power of offense type and other key variables when we hold other observable factors constant. We hope the findings from our analysis will permit readers to engage in more informed speculation about the ways in which various criminal law and sentencing reform ideas—for example, early-release policies targeting particular offense types or particular time-served requirements[7]—might affect public safety.

Offenders, OWLCATION, https://owlcation.com/social-sciences/Killers-Who-Kill-Again (last updated Feb. 17, 2020) ("Many murderers serve their time, are released into society, and never kill again. But, as we've seen, some have brutal instincts that cannot be controlled. How can you tell one from the other? The answer is that you can't; not with 100 percent accuracy.").

6 E. Ann Carson & Danielle Kaeble, *Data Collection: National Corrections Reporting Program (NCRP)*, BUREAU JUST. STAT., https://www.bjs.gov/index.cfm?ty=dcdetail&iid=268 (last visited Mar. 11, 2020).

7 *Cf.* Todd R. Clear & Dennis Schrantz, *Strategies for Reducing Prison Populations*, 91 PRISON J. 138S, 138S (2011) (examining early release, among other strategies, while noting that "[a]lthough there has been a great deal of policy activity trying to reduce the size of

To date, research in this area has been surprisingly limited for several reasons. Perhaps most important, criminal justice data rarely track individuals over time in a way that allows analysis of recidivism at all.[8] But even datasets that do often cannot meaningfully inform the specific questions that we believe are key. Although homicide cases are particularly important for public policy purposes and play an outsized role in shaping our long-term prison population,[9] homicide remains a relatively rare offense.[10] Studying repeat-homicide recidivism requires measuring a rare outcome within a small subgroup of the released prison population. Most datasets that track individuals over time cannot deliver the statistical power required for such precision because they involve relatively small samples;[11] many also have other limitations that preclude this sort of analysis—for example, recidivism measures may not accurately differentiate by old and new crime types, or between new crimes and technical parole violations.[12] By contrast, NCRP data do offer sufficient sample sizes and the rich detail required to answer these questions.[13] NCRP, too, has data-quality limitations that could affect some of our

prison populations . . . , very little of this activity has received rigorous evaluation"); Susan Turner, *More than Just Early Release: Considerations in Prison Reduction Policies*, 10 CRIMINOLOGY & PUB. POL'Y 917, 917 (2011) (discussing, in the context of state budget shortfalls, the utility of a "national evaluation study on . . . alternative strategies" to determine the effectiveness of various sentence-reduction policies).

8 *50-State Report on Public Safety, Part 2, Strategy 1: Use Data to Drive Recidivism-Reduction Efforts*, JUST. CTR., https://50statespublicsafety.us/part-2/strategy-1 (last visited Feb. 6, 2020) [hereinafter *50-State Report*] ("Unfortunately, most states still do not collect and analyze recidivism metrics in a comprehensive or timely enough fashion to use the data to improve practices.").

9 *See infra* Part I.

10 *Violent Crime*, *supra* note 3.

11 *E.g.*, Marieke Liem et al., *Criminal Recidivism Among Homicide Offenders*, 29 J. INTERPERSONAL VIOLENCE 2630 (2014) (studying recidivism among ninety-two paroled homicide offenders).

12 *See infra* note 80 and accompanying text; *see also* Ryan G. Fischer, *Are California's Recidivism Rates* Really *the Highest in the Nation? It Depends on What Measure of Recidivism You Use*, UC IRVINE CTR. EVIDENCE-BASED CORRECTIONS 1 (Sept. 2005), http://ucicorrections.seweb.uci.edu/files/2013/06/bulletin_2005_vol-1_is-1.pdf; Dana Goldstein, *The Misleading Math of 'Recidivism,'* MARSHALL PROJECT (Dec. 4, 2014), https://www.themarshallproject.org/2014/12/04/the-misleading-math-of-recidivism (noting several reasons why recidivism, "though constantly discussed, can be widely interpreted—and misinterpreted").

13 Carson & Kaeble, *supra* note 6 ("The National Corrections Reporting Program (NCRP) collects offender-level administrative data annually on prison admissions and releases, and yearend custody populations, and on parole entries and discharges in participating jurisdictions. Demographic information, conviction offenses, sentence length, minimum time to be served, credited jail time, type of admission, type of release, and time served are collected from individual prisoner records. The collection began in 1983 and is conducted annually. Beginning in 1999, jurisdictions also began providing a stock file for all inmates held at yearend. In 2012, jurisdictions began reporting parole entry data. The number of states submitting data to NCRP has varied over the years, but at least 38 states have provided some data since 2000. All fifty states provided at least one type of NCRP record in 2011–2014, with 49 submitting data in 2015 and 47 in 2016.").

analysis, but for certain states (particularly two of the largest, New York and California), the data have been shown to be trustworthy,[14] and we present both nationwide results and results from these more reliable states.

In this new analysis, we highlight the low reincarceration rate exhibited by older individuals released after murder or nonnegligent manslaughter offenses who have served sentences of at least five years (for example, in New York and California, only nine of about 3000 such releases resulted in new-crime reincarcerations and only three of those releases resulted in another murder or nonnegligent manslaughter sentence).[15] This finding suggests that there are diminishing returns to very long sentences, even for homicide, and that the vast majority of individuals released after serving a sentence for homicide are not dangerous. Although recidivism rates are not zero, these potential harms must be weighed against the large costs of incarceration to those incarcerated, their families and communities, and the state. In any event, the empirical data suggest that policymakers could enact reforms for potential earlier release without substantial public-safety risk. Moreover, the cost-benefit calculus has recently been transformed by the COVID-19 situation. This Article was largely complete before the pandemic began (and therefore the main body of our discussion does not focus on it), but as this goes to press, the stakes surrounding the questions we explore have risen. As many have recognized, prisons and jails are extremely vulnerable to the spread of infectious disease, due to the impossibility of effective social distancing, the large numbers of people coming in and out daily (especially staff), and even challenges associated with basic hygiene in such facilities.[16] And many have warned that once COVID-19 spreads through a prison facility, it will spread to surrounding communities via staff as well as prisoners transferred to local hospitals for treatments.[17] So now, whatever public-safety risk is posed by releasees must be weighed against the public-safety risk that detaining them under such conditions could pose by spreading the disease, in addition to the risk to prisoners themselves.

Accordingly, many governors and other public officials are considering releases or transfers to home confinement, especially of older and medically vulnerable prisoners—but many have also cited crime risks as reasons to limit such transfers, and many initial steps have specifically excluded those con-

14 *See infra* note 207 and accompanying text.

15 *See infra* Table 10 and accompanying text.

16 *E.g.*, Amanda Klonsky, Opinion, *An Epicenter of the Pandemic Will Be Jails and Prions, If Inaction Continues*, N.Y. TIMES (Mar. 16, 2020), https://www.nytimes.com/2020/03/16/opinion/coronavirus-in-jails.html; Margo Schlanger & Sonja Starr, *Four Things Every Prison System Must Do Today*, SLATE (Mar. 27, 2020), https://slate.com/news-and-politics/2020/03/four-steps-prevent-coronavirus-prison-system-catastrophe.html; Peter Wagner & Emily Widra, *Five Ways the Criminal Justice System Could Slow the Pandemic*, PRISON POL'Y INITIATIVE (Mar. 27, 2020), https://www.prisonpolicy.org/blog/2020/03/27/slowpandemic/.

17 *E.g.*, Conor Friedersdorf, *Let People Out of Jail*, ATLANTIC (Mar. 31, 2020), https://www.theatlantic.com/ideas/archive/2020/03/public-safety-case-more-jail-releases/609166/; Klonsky, *supra* note 16; Schlanger & Starr, *supra* note 16.

victed of violent crimes.[18] Yet, as we show, those with violent offenses constitute a clear majority of older prisoners, so excluding them from protective measures has the potential to greatly undermine those measures' effectiveness. This situation makes it even more important for policymakers to ask whether the crime risks in question are, in fact, supported by data.

I. VIOLENT OFFENSES, MASS INCARCERATION, AND CRIMINAL JUSTICE REFORM

In this Part, we provide background to help readers understand the policy stakes surrounding recidivism rates of those with prior violent offense records, particularly homicide convictions. In Section A, we show that the lengthy incarceration of individuals convicted for violent offenses has been a principal driver of mass incarceration and that it must be addressed in order to substantially reverse it. In Section B, we consider the demographics of this population, which is disproportionately black and older, relative to the prison population as a whole—making violent-offense convictions an important driver of racial disparity as well as of the rising cost of housing aging prisoners. Finally, in Section C, we explain that the public's fear of recidivism—especially of homicide and other violent crimes—is a pivotal factor shaping criminal justice policy, including the design of reform efforts that exclude individuals convicted of violent crimes.

A. Violent-Crime Sentences and Mass Incarceration

The U.S. prison population has expanded dramatically over the past half century.[19] Although there has been growing support for policies aimed at reducing the size of the prison population, most of these efforts have been

18 For example, at the federal level, Attorney General Barr issued a memorandum on March 26, 2020, urging that older and medically vulnerable prisoners be transferred to home confinement—but the memo stated that these transfers should focus on "non-violent" prisoners, particularly those with a minimum score on a risk-assessment tool. Memorandum from William P. Barr, Attorney Gen., to Michael Carvajal, Dir. of the Bureau of Prisons (Mar. 26, 2020), https://sentencing.typepad.com/files/bop-memo.home-confinement.pdf. By April 3, 2020, these instructions had led to the release of only 552 of the approximately 175,000 people in federal custody, and the first federal inmates had died of COVID-19, prompting the Attorney General to issue a broader directive to loosen these requirements. Josh Gerstein, *Barr to Speed Releases at Federal Prisons Hard Hit by Virus*, POLITICO (Apr. 3, 2020), https://www.politico.com/news/2020/04/03/barr-to-speed-releases-at-federal-prisons-hard-hit-by-virus-164175; *see also* Rebecca Falconer, *New York to Free 300 Nonviolent Rikers Island Inmates over Coronavirus*, AXIOS (Mar. 25, 2020), https://www.axios.com/new-york-to-free-300-nonviolent-rikers-island-inmates-over-coronavirus-fd90c122-cc3d-4a41-9bdf-06d2c6b8da98.html (describing release limited to nonviolent offenders); Justin Wise, *California to Release up to 3,500 Non-Violent Inmates amid Coronavirus Outbreak*, HILL (Mar. 31, 2020), https://thehill.com/homenews/state-watch/490498-california-to-release-3500-non-violent-inmates-amid-coronavirus-outbreak (same).

19 *Criminal Justice Facts*, SENT'G PROJECT, https://www.sentencingproject.org/criminal-justice-facts (last visited Feb. 15, 2019).

concentrated on individuals who are imprisoned for nonviolent crimes.[20] However, over 55% of the current prison population is incarcerated for a violent offense in one of the following categories[21]: murder, manslaughter, rape or sexual assault, robbery, or assault.[22] This list entails a relatively restrictive definition of "violent crime,"[23] a term whose definition has eluded consensus.[24] Because (under any reasonable definition) those convicted of

20 *See, e.g.*, Melissa Jeltsen, *The 2020 Candidates Still Won't Talk About the Main Cause of Mass Incarceration*, HUFFPOST (Sept. 9, 2019), https://www.huffpost.com/entry/2020-candidates-mass-incarceration-violent-crime_n_5d6ea0afe4b09bbc9ef58d8a; Jamiles Lartey, *Can We Fix Mass Incarceration Without Including Violent Offenders?*, MARSHALL PROJECT (Dec. 12, 2019), https://www.themarshallproject.org/2019/12/12/can-we-fix-mass-incarceration-without-including-violent-offenders; Elizabeth Warren (@ewarren), TWITTER (Feb. 27, 2020, 11:06 AM), https://twitter.com/ewarren/status/1233060813424021505 (recommending the use of clemency for older nonviolent offenders with "unduly long sentences"). One notable exception that highlights violent offenders is work done by John Pfaff. *See* JOHN F. PFAFF, LOCKED IN: THE TRUE CAUSES OF MASS INCARCERATION AND HOW TO ACHIEVE REAL REFORM (2017); *see also* John Pfaff, *Decarceration's Blindspots*, 16 OHIO ST. J. CRIM. L. 253 (2018); Julia Brodsky, *Prevention Before Incarceration: Focusing on Violent Offenders*, FORDHAM L. NEWS (May 6, 2019), https://news.law.fordham.edu/blog/2019/05/06/prevention-before-incarceration-focusing-on-violent-offenders.

21 The language often used to label this population is "violent offender." Unfortunately, this term is used in an inexact way or as a pejorative label rather than designating an identifiable group. *See* AUSTIN ET AL., *supra* note 2, at 34 n.1 ("We use the terms 'violent offender' and 'violent offender label' to refer to common usage in policy and politics that is often applied to those charged or convicted of crimes involving violence. As we argue throughout the paper, we view the term as a pejorative label, rather than designating real groups of people in the world. Throughout the paper we have mostly avoided the use of quotations around the phrase 'violent offender' because we are intending to describe general usage rather than limited use by a specific source.").

22 JENNIFER BRONSON & E. ANN CARSON, BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, PRISONERS IN 2017, at 1, 21 tbl.12 (2019), https://bjs.gov/content/pub/pdf/p17.pdf.

23 Eli Hager, *When "Violent Offenders" Commit Nonviolent Crimes*, MARSHALL PROJECT (Apr. 3, 2019), https://www.themarshallproject.org/2019/04/03/when-violent-offenders-commit-nonviolent-crimes ("Similarly, purse snatching is considered a 'violent' offense in several states. So are the manufacture of methamphetamines and theft of drugs.").

24 *See* JEROME G. MILLER, SEARCH AND DESTROY: AFRICAN-AMERICAN MALES IN THE CRIMINAL JUSTICE SYSTEM 11–12 (2d ed. 2011) (discussing how "legislation that widened the definition of who would be considered violent" was "the most common way of bolstering the rationale for whatever 'war' [against crime] was being actively waged" in the "late 1980s and early 1990s"); Brandon Stahl & Alejandra Matos, *Minneapolis Police Overreporting Rape Statistics*, STAR TRIB. (Mar. 11, 2013), http://www.startribune.com/minneapolis-police-overreporting-rape-statistics/196794231 (discussing how the Minneapolis Police Department overreported "forcible rapes" to the FBI's Uniform Crime Reporting program for five years beginning in 2007 and reporting that a Department of Justice statistician indicated the error may have let Minneapolis receive larger grants from the Department). *But see* Jane W. Gibson-Carpenter & James E. Carpenter, *Race, Poverty, and Justice: Looking Where the Streetlight Shines*, KAN. J.L. & PUB. POL'Y, Spring 1994, at 99, 108 (discussing how an "individual officer's definition of criminal acts can vary and may . . . reduce or inflate reported crimes" and that "[d]ecisions may be made at the departmental level to boost public confidence in law enforcement by underreporting" crimes). These definitional questions raise

violent crimes constitute a majority of those incarcerated, failure to include them and their sentences as key targets in reforms will necessarily limit any policy's effectiveness in reducing prison populations.[25]

TABLE 1: VIOLENT-OFFENDER SENTENCES AND SENTENCE PROPORTION SERVED (REPRODUCTION OF AUSTIN ET AL. TABLE 3)[26]

	Current Prison Pop. (%)	Prison Release (%)	Sentence Length (Months)	Length of Stay (Months)	Portion of Sentence Served (%)
Violent	55	29	81	56	69
Murder/Non-neg. Mans.	14	2	232	180	78
Neg. Homicide/Mans.	1	1	151	62	41
Rape/Sexual Assault	13	5	132	74	56
Robbery	13	7	91	56	62
Assault	11	11	56	30	54
Other Violent	3	3	50	37	74
Property	18	27	51	21	41
Drug	15	24	58	22	38
Public Order	12	19	45	20	44
Other	1	1	79	27	34

conceptual problems that complicate reform efforts. Benjamin Levin, *It's Time to Rethink "Violent" Crime: How Mislabeling Misconduct Contributes to Our Bloated Criminal Justice System*, SALON (June 19, 2016), https://www.salon.com/2016/06/19/its_time_to_rethink_violent_crime_how_mislabeling_misconduct_contributes_to_our_bloated_criminal_justice_system ("If 'violent crime' means so many things, then it only creates the illusion that society has sorted out the true 'bad guys' or punished the worst conduct. Instead, it becomes a proxy for social harm, risk prediction, or moral condemnation."). Labeling an individual as a "violent offender" carries with it significant social, economic, and legal costs to the individual. *See, e.g.*, Giulia Lowe & Gwenda Willis, *"Sex Offender" Versus "Person": The Influence of Labels on Willingness to Volunteer with People Who Have Sexually Abused*, SEXUAL ABUSE 2–3 (Apr. 8, 2019), https://journals.sagepub.com/doi/pdf/10.1177/1079063219841904.

25 John Pfaff, *The Wrong Path to Penal Reform*, WASH. POST, July 27, 2015, at A15. While some courts and scholars are beginning to recognize this general point, *see, e.g.*, United States v. Moore, 851 F.3d 666, 676 (7th Cir. 2017) (Posner, J., dissenting), additional attention and analysis is required in order to design a low-risk approach to imposing shorter sentences for violent crimes.

26 This table is a reproduction of table 3 in AUSTIN ET AL., *supra* note 2, at 20 tbl.3 (citing Thomas P. Bonczar et al., *National Corrections Reporting Program, 2009—Statistical Tables (Update)*, BUREAU JUST. STAT. (May 5, 2011), http://www.bjs.gov/index.cfm?ty=pbdetail&iid=2174). The table's first column reports the proportion of the 2016 state prison population by crime type. The second gives the proportion of prison releases. The third shows the mean sentence assigned in months. The fourth indicates how long the average individual observed in prison at some point in 2016 has been in prison. The last column is the average percentage of assigned sentences that has been served. "Other Violent" includes kidnapping, blackmail, extortion, hit and run with injury, and other unknown violent offenses. For more information on the data Austin et al. use in their work, see

A majority of prisoners have been convicted of violent crimes in large part because violent offenses typically involve longer prison sentences. There is much less violent crime than property crime reported each year,[27] and fewer than one third of new prison admissions involve a primary offense that is violent using our definition.[28] But these crimes lead to much longer sentences on average, both because judges sentence violent-crime offenders to longer terms and because prisoners serve larger fractions of their violent-crime sentences on average before being released.[29] For example, Table 1 shows that individuals convicted of violent crimes and released in 2016 served an average of 69% of their assigned sentence, while this number is 38% for drug crimes and 41% for property crimes.[30]

This pattern becomes starker as we divide the broad category of violent offenses into its constituent parts. For instance, despite the relative rarity of homicide, individuals convicted of these crimes comprise a substantial portion of the prison population due to the dramatically longer sentences they receive (more than ten years longer on average relative to sentences for most other offenses) and the much higher percentage of their sentences they serve (about forty percentage points higher than prisoners who have been imprisoned for nonviolent offenses).[31] Recent estimates indicate that about 14% of state prisoners were convicted specifically for murder or nonnegligent manslaughter, a proportion that is comparable in size to the population imprisoned for drug offenses (15%) and is larger than the population imprisoned for public-order offenses (12%).[32] Approximately the same number of individuals are currently imprisoned for murder and nonnegligent manslaughter as are imprisoned for burglary, larceny-theft, and motor vehicle theft combined.[33] Accodingly, if reformers hope to achieve large reductions in the size of the incarcerated population as a whole, they will need to address individuals convicted of more serious offenses.

B. Distributional Consequences of Violent-Crime Sentences

The average length of criminal sentences "actually served" has increased dramatically in the past few decades,[34] although this growth has dwindled (or

---

Danielle Kaeble, Bureau of Justice Statistics, U.S. Dep't of Justice, Time Served in State Prison, 2016 (2018), https://bjs.gov/content/pub/pdf/tssp16.pdf.

27 John Gramlich, *5 Facts About Crime in the U.S.*, Pew Res. Ctr. (Oct. 17, 2019), https://www.pewresearch.org/fact-tank/2019/10/17/facts-about-crime-in-the-u-s/.

28 E. Ann Carson & Daniela Golinelli, Bureau of Justice Statistics, U.S. Dep't of Justice, Prisoners in 2012: Trends in Admissions and Releases, 1991–2012, at 3 (2013), https://bjs.gov/content/pub/pdf/p12tar9112.pdf.

29 *See* Austin et al., *supra* note 2, at 20 tbl.3 (citing Bonczar et al., *supra* note 26).

30 *See id.*

31 *See id.*

32 Bronson & Carson, *supra* note 22, at 15, 21 tbl.12.

33 *Id.* at 22 tbl.13.

34 Leigh Courtney et al., Urban Inst., A Matter of Time: The Causes and Consequences of Rising Time Served in America's Prisons 5–9 (2017), https://apps.urban.org/features/long-prison-terms/a_matter_of_time_print_version.pdf. *Compare* Kaeble, *supra*

even receded) in the most recent years.[35] One study indicates that from 1990 to 2009, the average time served by individuals released from incarceration increased from 2.1 to 2.9 years, a 36% increase in less than twenty years.[36] For those released in 2016, some evidence indicates that this number has ebbed slightly to an average time served of 2.6 years.[37] The average for all prisoners (including those who are never released) is presumably higher, because these estimates are calculated using only data on released individuals.[38] Since 2000, all forty-four states reporting data (and D.C.) have experienced an increase in the average time actually served across all individuals in their current prison populations.[39]

Beyond these changes in the mean time served, there has also been a demographic shift driven partly by changes in the distribution of time served: the U.S. prison population is aging.[40] Figure 1 shows a stark change over the past decades.[41] In 1993, there were very few individuals over the age of fifty

note 26, *with* BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, SENTENCING AND TIME SERVED (1987), https://www.bjs.gov/content/pub/pdf/sts.pdf.

35 This stagnation may be due to a number of recent state initiatives to reduce such growth. *See, e.g.*, ADAM GELB ET AL., PEW CTR. ON THE STATES, TIME SERVED: THE HIGH COST, LOW RETURN OF LONGER PRISON TERMS 5 (2012), https://www.pewtrusts.org/~/media/legacy/uploadedfiles/wwwpewtrustsorg/reports/sentencing_and_corrections/prisontimeservedpdf.pdf (documenting initiatives such as increasing threshold dollar amounts for felony property crimes, revising the scope of drug offenses, rolling back mandatory minimums, and increasing opportunities to earn sentencing reductions).

36 *Id.* at 13.

37 KAEBLE, *supra* note 26, at 1.

38 NAT'L RESEARCH COUNCIL, THE GROWTH OF INCARCERATION IN THE UNITED STATES: EXPLORING CAUSES AND CONSEQUENCES 52 (Jeremy Travis et al. eds., 2014) ("Given that sentence lengths for serious crimes have increased greatly since 1980, the full impact of lengthy sentences on the level of incarceration has yet to be felt. The contribution of long sentences to rising incarceration rates can be fully observed only over a very long period. Without a sufficient observation period for lengthy sentences, average sentence lengths will also be underestimated. Very long sentences have increased in number since the proliferation of enhancements for those convicted of second and third felonies, the institution of truth-in-sentencing requirements, and other shifts in sentencing policy . . . ."). Consider this example: if sentences actually served became more dispersed, with some sentences becoming shorter and some becoming longer (perhaps much longer), a study of only "released" individuals would indicate shorter sentences on average even in scenarios in which sentences were actually becoming much longer—because the individuals serving the longer sentences would still be waiting for release.

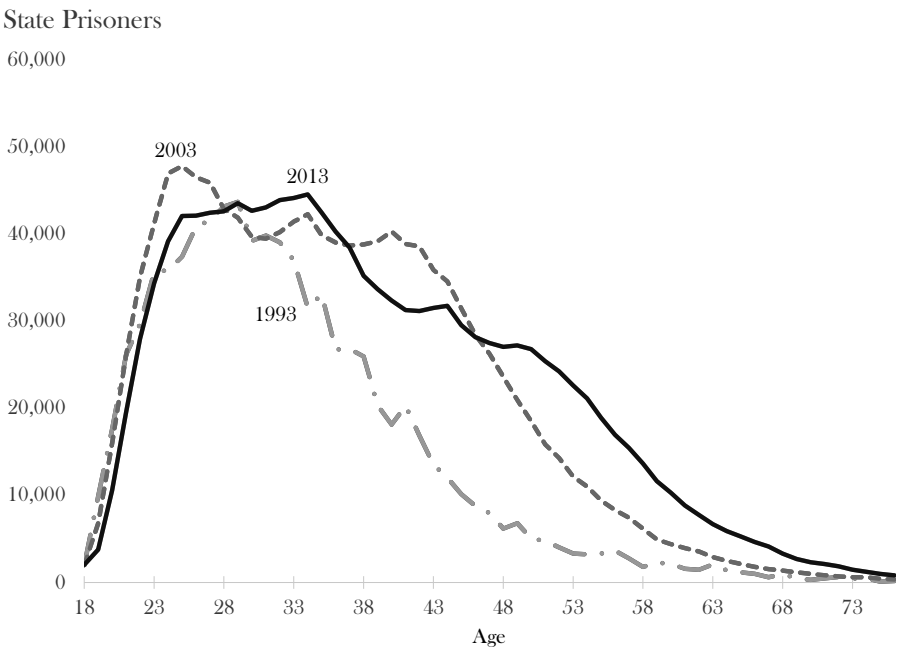
39 *See* COURTNEY ET AL., *supra* note 34, at 5.

40 This is a consequence of the fact that we currently imprison individuals convicted of violent crimes for much longer than we used to several decades ago (otherwise the age distribution of prisoners would have achieved a steady state by now). Changes to the length of sentences served impacts the age distribution of the prison population with significant time lags as this is a change to the flow of prison entry and exit—not to the stock of existing prisoners directly.

41 *See infra* Figure 1; *see also* Aging Inmate Comm., *Aging Inmates: Correctional Issues and Initiatives*, MD. B.J., Nov. 2011, at 22, 24 ("A large number of middle-aged prisoners are approaching old age. For instance, almost 45% of the federal prison population is over the age of 51. In the past 20 years, the number of older prisoners has grown by 750 percent.").

in prison, about 45,000 people, or 5.3% of the prison population. But this number grew noticeably to 243,700 people, or 18.4% of the (now-larger) prison population, by 2013. The aging of the prison population is driven by several factors. First, even if nothing else changes, the demographics of the prison population are likely to move in concert with those of the general population. All else equal, an older general population corresponds to an older imprisoned population. Thus, the general aging of the U.S. population driven by the baby boom and other demographic dynamics should also naturally translate to an older prison population.[42]

FIGURE 1: THE AGING STATE PRISON POPULATION[43]



42 Put differently, there has been an increase in the average age of newly admitted prisoners. As the average age of the U.S. population has grown, so too has the number of newly admitted elderly offenders. Importantly, this is true only in absolute terms; the proportion of older individuals in prison per older individuals in the general population has remained roughly constant over time. However, there are fewer younger offenders, even after controlling for demographic trends. Curtailing the inflow of new younger prisoners, whether because young individuals are offending less frequently or because there have been attempts to stymie the use of prison as a punishment tool for the young, raises the age of the average prisoner. *See generally* HOWARD N. SNYDER, BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, ARREST IN THE UNITED STATES, 1990–2010 (2012), https://bjs.gov/content/pub/pdf/aus9010.pdf.

43 CARSON & SABOL, *supra* note 4, at 2 tbl.1.

However, other factors have accelerated the aging of the state prison population.[44] This is evident in Table 2, which strips away the effects of the generally aging population by displaying imprisonment rates per capita for selected age groups. Even after taking into account the aging of the population, there are substantially more older imprisoned individuals in recent years.[45] From 1993 to 2013, the total state prison population per capita grew by over 20%, with the increase between 1993 and 2003 dominating a slight drop over the last decade of the sample. During this two-decade period, relatively fewer younger individuals were admitted to state prison on a per capita basis, and this imprisonment decline can be seen in each of the 18–19, 20–24, and 25–29 age groups.[46] However, the older end of the age distribution exhibits an offsetting trend. In 1993, 18 individuals over the age of sixty-five were imprisoned in state facilities per 100,000 individuals older than sixty-five in the U.S. population.[47] By 2013, this statistic had grown to 64 individuals, an increase of more than 250%.[48] Although the growth in the over-sixty-five population is the most extreme, the basic trend is not exclusive to the oldest category. The imprisonment rate among forty-to-fifty-four-year-olds increased from 259 to 628 per 100,000 (an increase of over 100%), and the rate for individuals aged fifty-five to sixty-four increased from 96 to 260 per 100,000 (an increase of over 150%).[49]

---

44 *Id.* at 27 ("Longer sentences, more time served, and increased admissions among older offenders led to aging in the state prison population[.]"); JAMIE FELLNER ET AL., HUMAN RIGHTS WATCH, OLD BEHIND BARS: THE AGING PRISON POPULATION IN THE UNITED STATES (2012), https://www.hrw.org/sites/default/files/reports/usprisons0112webwcover_0_0.pdf (noting that an increase in long sentences, in life sentences, in the number of elderly offenders, and in the lack of early release availability at least in part cause the aging of state prison populations); NAT'L ASS'N OF AREA AGENCIES ON AGING, SUPPORTING AMERICA'S AGING PRISONER POPULATION: OPPORTUNITIES & CHALLENGES FOR AREA AGENCIES ON AGING 4 (2017), https://www.n4a.org/Files/n4a_AgingPrisoners_23Feb2017REV%20(2).pdf (same).

45 *See* CARSON & SABOL, *supra* note 4, at 2 tbl.1; FELLNER ET AL., *supra* note 44, at 22 (reporting, for example, an over-500% increase of prisoners 55 or older in California from 1990 to 2009 and an over-200% increase in New York).

46 CARSON & SABOL, *supra* note 4, at 4 tbl.2.

47 *Id.*; *see also* Dan Rodricks, *Why Is Maryland Keeping an 85-Year-Old Man and Four Other Octogenarians in Prison?*, BALT. SUN (Nov. 5, 2019), https://www.baltimoresun.com/opinion/columnists/dan-rodricks/bs-md-rodricks-11-20191105-gqhblkfpl5b3jbynv5gebwjgey-story.html (providing a specific example of older imprisoned individuals).

48 CARSON & SABOL, *supra* note 4, at 4 tbl.2.

49 Calculations are from *infra* Table 2. Calculations for the fifty-five-to-sixty-four age group are generated from CARSON & SABOL, *supra* note 4, at 4 tbl.2; and *Intercensal Estimates of the United States Resident Population by Age and Sex: 1993*, U.S. CENSUS BUREAU [hereinafter *Intercensal Estimates*], https://www.census.gov/data/tables/time-series/demo/popest/intercensal-national.html (last updated Feb. 8, 2017); and *Annual Estimates of the Resident Population for Selected Age Groups by Sex for the United States, States, Counties, and Puerto Rico Commonwealth and Municipios: April 1, 2010 to July 1, 2013*, U.S. CENSUS BUREAU (June 2014) [hereinafter *Annual Estimates*]. There were approximately 21,087,000 people in the United States between ages fifty-five and sixty-four in 1993 and 20,300 people were impris-

TABLE 2: CONDITIONAL AGING OF STATE PRISON POPULATION[50]

Imprisonment Per 100,000 Residents in an Age Range

Age	1993	2003	2013
Total	448	575	543
18–19	394	276	167
20–24	886	945	712
25–29	1,080	1,130	979
30–34	813	995	1,017
35–39	541	931	910
40–44	374	782	748
45–49	213	538	650
50–54	144	326	497
55–59	117	194	318
60–64	75	122	188
65 or Older	18	33	64
40–54	259	562	628
55 or Older	49	90	154

Some portion of the rapid aging of the prison population is the product of two shifts that took place in the 1980s and 1990s: increasingly harsh sentencing laws (including mandatory minimums and mandatory sentencing guidelines) and the truth-in-sentencing movement, which greatly reduced the availability of early release.[51] Assuming no other behavioral or health

oned; there were approximately 39,316,000 people in the United States between ages fifty-five and sixty-four in 2013 and 102,400 were imprisoned.

50 CARSON & SABOL, *supra* note 4, at 4 tbl.2. These numbers are ratios and thus the table should be read as follows: in 2013, for every 100,000 people in the United States between ages fifty and fifty-four, 497 were in prison. Thus the last two rows are not a simple summation of the prior categories—there is no common denominator. We replicate the table and derive additional age groups in the text preceding the table using CARSON & SABOL, *supra* note 4, at 2 tbl.1; the intercensal estimate from December 1993, *Intercensal Estimates*, *supra* note 49; and the annual estimate from 2013, *Annual Estimates*, *supra* note 49.

51 *See* PAULA M. DITTON & DORIS JAMES WILSON, BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, TRUTH IN SENTENCING IN STATE PRISONS 1 (1999), https://bjs.gov/content/pub/pdf/tssp.pdf ("To assure that offenders serve a large portion of their sentence, the U.S. Congress authorized funding for additional State prisons and jails through the Violent Crime Control and Law Enforcement Act of 1994."); Jalila Jefferson-Bullock, *Quelling the Silver Tsunami: Compassionate Release of Elderly Offenders*, 79 OHIO ST. L.J. 937, 939, 945–47 (2018); *id.* at 945 ("Congress passed the 'precedent-shattering' Comprehensive Crime Control Act of 1984. . . . The Sentencing Commission's legacy endures in the form of harsh mandatory sentences, reduced parole opportunities, and overcrowded prisons." (footnotes omitted)); *see also* BARBARA S. VINCENT & PAUL J. HOFER, FED. JUDICIAL CTR., THE CONSEQUENCES OF MANDATORY MINIMUM PRISON TERMS: A SUMMARY OF RECENT FINDINGS

changes, policies that increase the length of criminal sentences result in older prison populations. Recent sentencing reform efforts at both the state and federal levels may auger modest downward movement in the sentences imposed by judges going forward.[52] If this policy trend continues or accelerates, the aging of the incarcerated population should eventually slow and possibly reverse, although any effects might not be noticeable for years, after the release or death of the prisoners still serving long sentences for older crimes.[53] Another contributing factor could be the long-term decline in crime that the United States has experienced since the early 1990s.[54]

While people imprisoned for violent behavior make up a majority of prisoners overall, they make up the *vast* majority of the oldest prisoners.[55] In 2013, approximately two out of every three state prisoners over the age of fifty-five were incarcerated for violent offenses; half were imprisoned for rape or homicide.[56] Table 3 indicates that the state prison population convicted for violent crimes skews older relative to the general state prison population. Only 6.3% and 6.5% of individuals committed to prison for property crime and drug crime, respectively, are over fifty-five. By contrast, almost 16.3% of those convicted of murder are over fifty-five. Thus, decarceration strategies aimed only at individuals convicted of nonviolent property and drug crimes will inevitably produce even older prison populations.

(1994) (discussing the impact of mandatory minimum laws on drug offenders); Elsa Y. Chen, *Impacts of "Three Strikes and You're Out" on Crime Trends in California and Throughout the United States*, 24 J. CONTEMP. CRIM. JUST. 345, 345 (2008) ("Between the years 1993 and 1997, 'Three Strikes and You're Out' sentencing laws were passed in 24 American states and the federal justice system. Three Strikes laws mandate long sentences for certain habitual offenders, usually 25 years to life in prison for third-time violent offenders." (endnote omitted)).

52 Examples of efforts to lower the length of sentences include shifting guidelines for "drugs minus two" at the federal level and twenty-nine modest reforms to mandatory sentencing procedures. The general consensus is that the impact of reforms to date may be limited. *See* Marc Mauer, *Long-Term Sentences: Time to Reconsider the Scale of Punishment*, 87 UMKC L. REV. 113, 119 (2018) ("At the federal level, the most impactful shift has been the decisions by the U.S. Sentencing Commission to revise drug offense guidelines downward . . . . [T]he revised prison terms are still quite harsh. For example, the . . . 'drugs minus two' circumstances lowered the average prison term from twelve years to ten years.").

53 *Id.* at 128–31 (describing potential reforms).

54 Gramlich, *supra* note 27 (documenting a decline in crime rates). This decline has affected almost all crime categories, including homicide and other violent crimes carrying long prison terms. Systematic crime declines like this can be expected to contribute to an aging population. Most crime is committed by fairly young people, so in eras when crime is high, many young people will (other things equal) be admitted to prison. When crime is low, as it has been for the past two decades or so, there are fewer new admissions, and therefore fewer younger people in prison—meanwhile, those still incarcerated from earlier generations have become older.

55 CARSON & SABOL, *supra* note 4, app. at 35 tbl.9. Note that the table shows the percentage of the population imprisoned for a given offense for each age group. Categories may not sum due to rounding in the underlying source data.

56 *Id.*

TABLE 3: AGES OF SENTENCED STATE PRISONERS IN 2013[57]

Most Serious Imprisonment Offense	18–29	30–39	40–54	55+
Total	29.5	30.0	30.5	9.9
Violent	28.6	28.3	30.8	12.3
Murder/Non-neg. Mans.	18.7	31.6	33.9	16.3
Negligent Homicide	30.0	31.7	27.8	10.0
Rape/Sexual Assault	16.5	22.9	40.3	21.4
Robbery	44.5	27.0	22.6	5.1
Assault	34.6	31.2	26.8	6.9
Property	35.5	28.2	29.5	6.3
Burglary	41.0	25.9	26.9	5.7
Larceny	27.4	29.2	35.2	8.4
Auto Theft	35.2	32.4	27.8	3.7
Fraud/Forgery	23.1	34.1	34.8	7.7
Drug	25.8	37.8	29.5	6.5
Public Order	27.9	30.3	32.2	9.5

From a policy perspective, the aging of the prison population matters in part because, all else equal, older prisoners are much more expensive to incarcerate. At least one of the reasons this is true is that older prisoners are more susceptible to costly chronic medical conditions.[58] Estimates on the disparity in costs by age vary, and the exact magnitudes depend heavily on assumptions, but the difference is clearly significant.[59] Specific subsets of the

57 *Id.* at 9, 12.

58 *See* Zachary Psick et al., *Older and Incarcerated: Policy Implications of Aging Prison Populations*, 13 INT'L J. PRISONER HEALTH 57, 58 (2017); Matt McKillop & Alex Boucher, *Aging Prison Populations Drive Up Costs*, PEW CHARITABLE TR. (Feb. 20, 2018), https://www.pewtrusts.org/en/research-and-analysis/articles/2018/02/20/aging-prison-populations-drive-up-costs.

59 At the federal level, the average direct cost of imprisoning an aging person (defined in this study as fifty or older) is 8% higher than the cost of imprisoning someone younger, and the prisons with the highest percentage of aging individuals spent five times more per prisoner on medical care than those with the lowest percentages. OFFICE OF THE INSPECTOR GEN., U.S. DEP'T OF JUSTICE, THE IMPACT OF AN AGING INMATE POPULATION ON THE FEDERAL BUREAU OF PRISONS, at i–ii (2015), https://oig.justice.gov/reports/2015/e1505.pdf. But under the low-cost assumptions for this calculation, aging prisoners are about as costly to imprison as younger prisoners. Other estimates that use a much broader and more comprehensive measure of imprisonment costs indicate that the cost of housing a prisoner aged fifty or older is about $68,000 in 2012 dollars, twice the cost of incarcerating an average prisoner (which was estimated to cost about $34,000 annually). INIMAI CHETTIAR ET AL., AM. CIVIL LIBERTIES UNION, AT AMERICA'S EXPENSE: THE MASS INCARCERATION OF THE ELDERLY, at ii (2012), https://www.aclu.org/sites/default/files/field_document/elderlyprisonreport_20120613_1.pdf. This particular calculation includes the impact of prison

older population like the infirm elderly may be two to three times more expensive to imprison.[60] Thus, decarceration policies that focus on nonviolent crime will not only result in at best modest reductions in the size of the incarcerated populations but will also have the fiscally dispiriting consequence of leaving behind the most financially costly to imprison.

Reform that reduces time in prison on average without reducing time served for violent-crime convictions is also likely to exacerbate existing racial disparities in state prisons.[61] Despite making up a much smaller portion of the overall population, non-Hispanic black prisoners outnumber non-Hispanic white prisoners in state prisons (as of 2016).[62] The racial disparity in incarceration is more dramatic for violent crimes than for other crimes. As of 2016, black people were about seven times more likely to be incarcerated than white people for violent crimes (and about nine times more likely for murder), three times more likely to be incarcerated for property crimes, five times more likely to be incarcerated for drug crimes, and five times more likely to be incarcerated for public-order crimes.[63] Thus, even if all racial disparities in prison admission rates, sentence lengths, and early release rates were eliminated within each category of crime, substantial racial disparities in incarceration would remain simply because of how much longer we imprison people for violent crimes.

Recent work by researchers at the Council on Criminal Justice demonstrates how changes in sentencing and release policies by offense type can

---

on direct expenses, healthcare, other public benefits, parole, housing costs, and tax revenue. The earlier calculation addressed only federal prison policies and more narrowly included just the direct expenses of imprisonment.

60 *See* B. JAYE ANNO ET AL., U.S. DEP'T OF JUSTICE, CORRECTIONAL HEALTH CARE: ADDRESSING THE NEEDS OF ELDERLY, CHRONICALLY ILL, AND TERMINALLY ILL INMATES 21 (2004), https://s3.amazonaws.com/static.nicic.gov/Library/018735.pdf; Cyrus Ahalt et al., *Paying the Price: The Pressing Need for Quality, Cost, and Outcomes Data to Improve Correctional Health Care for Older Prisoners*, 61 J. AM. GERIATRICS SOC'Y 2013 (2013); *see also* CHRISTIAN HENRICHSON & RUTH DELANEY, VERA INST. OF JUSTICE, THE PRICE OF PRISONS: WHAT INCARCERATION COSTS TAXPAYERS 6, 8 fig.3 (2012), https://shnny.org/uploads/Price-of-Prisons.pdf.

61 *See generally* ASHLEY NELLIS, SENTENCING PROJECT, THE COLOR OF JUSTICE: RACIAL AND ETHNIC DISPARITY IN STATE PRISONS 12 (2016) (recommending shorter sentences for serious offenders as one of multiple policies to reduce racial and ethnic disparity in state prisons); WILLIAM J. SABOL ET AL., COUNCIL ON CRIMINAL JUSTICE, TRENDS IN CORRECTIONAL CONTROL BY RACE AND SEX 8 (2019), https://cdn.ymaws.com/counciloncj.org/resource/collection/4683B90A-08CF-493F-89ED-A0D7C4BF7551/Trends_in_Correctional_Control_-_FINAL.pdf.

62 E. ANN CARSON, BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, PRISONERS IN 2016, at 15 tbls.9 & 10 (2018), https://bjs.gov/content/pub/pdf/p16.pdf. We define "white" as exclusive of persons of Hispanic or Latinx origin and persons of two or more races.

63 Statistics are created based on authors' calculations from table 13 of BRONSON & CARSON, *supra* note 22, at 22 tbl.13. The denominator for this calculation is taken as the population that is eighteen or older from the 2016 Census.

alter overall black-white imprisonment disparities.[64] The Council's work documents a substantial decline in racial imprisonment disparities since 2000.[65] One driver of this convergence appears to be changes in drug incarceration, which used to be the crime category exhibiting the largest racial disparities.[66] The black-white incarcerated population gap for drug crimes declined from black individuals being fifteen times more likely to be incarcerated than white individuals to being about five times more likely from 2000 to 2016.[67] A similar, although smaller, decline has been observed for property crimes over time and is reflected in declining disparities in the overall rate of imprisonment.[68] However, during this time period, racial disparities for violent-crime imprisonment have remained relatively constant.[69] These trends highlight an additional benefit of focusing decarceration efforts on people who are imprisoned for violent offenses—shorter sentences will not only reduce mass incarceration but will reduce racial disparities in imprisonment as well.

C. Recidivism and Criminal Justice Policy

One of the most important reasons that our society chooses to incarcerate people is to protect the public from crimes that those individuals might otherwise commit in the future if they were at liberty. Of course, this is not the only reason a society incarcerates, as there are many views of the functions and justifications of criminal law.[70] Some policymakers, following a retributive theory of punishment, might object that lifelong or lengthy imprisonment is simply what people deserve for committing homicide, for

64 SABOL ET AL., *supra* note 61, at 8.

65 *Id.* at 4 (noting that "[b]etween 2000 and 2016, racial and ethnic disparities in the rates at which adults were under correctional control narrowed across" state prison, parole, jail, and probationary "criminal justice populations").

66 *Id.* at 8 (recognizing that, although "reductions in disparities in black-white imprisonment rates occurred for all crime types" between 2000 and 2016, "the largest drop occurred for drug offenses").

67 *Id.* The Council on Criminal Justice (CCJ) calculation is performed on slightly different data than the racial-disparities estimates that we present and discuss above. The patterns documented by CCJ are consistent with information taken directly from the BJS study, but the CCJ finds slightly smaller (about one percentage point smaller) disparities in black-white imprisonment rates.

68 *Id.* (reporting that the black-white incarcerated population gap for property crimes declined from black individuals being 5.2 times more likely to be incarcerated in 2000 to being three times more likely to be incarcerated in 2016, representing the "second largest black-white disparity reduction" during that period).

69 *Id.* (stating that the black-white incarcerated population gap for violent offenses declined from black individuals being 8.4 times more likely to be incarcerated in 2000 to being 6.6 times more likely to be incarcerated in 2016, with nearly all of the decrease occurring between 2000 and 2010 and remaining "relatively constant" thereafter).

70 *See, e.g.*, Colleen P. Eren, Opinion, *Let Bernie Madoff, and Many More, Out of Prison*, N.Y. TIMES (Feb. 17, 2020), https://www.nytimes.com/2020/02/17/opinion/bernie-madoff-release.html (using Bernie Madoff as an example to discuss the need to examine penological aims beyond retribution for crimes committed in order to reduce mass incarceration).

example.[71] Others might think that extreme sentences are usually unjust in retributive terms even if they do prevent future crimes, either by deterrence or incapacitation.[72] Reasonable people come to different conclusions on questions of moral desert, and this work does not engage these issues.[73] Still, most policymakers value public safety. We also do not focus on questions of general deterrence, but we do note that empirical estimates of the deterrent effect of imprisonment on violent crime are mixed at best. Research suggests that lengthening already-long prison sentences has little to no deterrent effect on violent crime.[74]

This work focuses on one public-safety-oriented purpose of incarceration: incapacitation, especially the prevention of violent recidivism. Specifi-

71 *Retributive Justice*, STAN. ENCYCLOPEDIA PHIL. (June 18, 2014), https://plato.stanford.edu/entries/justice-retributive/ ("Many share the intuition that those who commit wrongful acts, especially serious crimes, should be punished even if punishing them would produce no other good."); Harmelin v. Michigan, 501 U.S. 957, 1028 (1991) (Stevens, J., dissenting) ("Because [a mandatory sentence of life imprisonment] does not even purport to serve a rehabilitative function, the sentence must rest on a rational determination that the punished 'criminal conduct is so atrocious that society's interest in deterrence and retribution wholly outweighs any considerations of reform or rehabilitation of the perpetrator.'" (quoting Furman v. Georgia, 408 U.S. 238, 307 (1972) (Stewart, J., concurring))).

72 *See* Michele Cotton, *Back with a Vengeance: The Resilience of Retribution as an Articulated Purpose of Criminal Punishment*, 37 AM. CRIM. L. REV. 1313, 1315–16 (2000) (explaining that retribution is concerned with "imposing merited harm upon the criminal for his wrong" and not with "the achievement of social benefits" through deterrence or incapacitation).

73 *See, e.g.*, Campbell Robertson, *Would You Let the Man Who Killed Your Sister Out of Prison?*, N.Y. TIMES (July 19, 2019), https://www.nytimes.com/2019/07/19/us/violent-crime-ohio-prison.html (describing how even different members of a homicide victim's family have different opinions on a criminal's deserved punishment).

74 *See* John J. Donohue III, *Assessing the Relative Benefits of Incarceration: Overall Changes and the Benefits on the Margin*, *in* DO PRISONS MAKE US SAFER? 269, 274, 301–02 (Steven Raphael & Michael A. Stoll eds., 2009) (showing diminishing marginal returns for additional incarceration). Compare the estimates of Steven D. Levitt, *The Effect of Prison Population Size on Crime Rates: Evidence from Prison Overcrowding Litigation*, 111 Q.J. ECON. 319, 342 tbl.VII (1996) (denoted in brackets below), with those of Thomas B. Marvell & Carlisle E. Moody, Jr., *Prison Population Growth and Crime Reduction*, 10 J. QUANTITATIVE CRIMINOLOGY 109, 132 (1994) (denoted in quotation marks below), for the following elasticities for the last prisoner incarcerated: [-0.147] "-0.065" (murder); [-0.246] "-0.113" (rape); [-0.410] "-0.056" (assault); [-0.703] "-0.260" (robbery); [-0.401] "-0.253" (burglary); [-0.277] "-0.138" (larceny); and [-0.259] "-0.200" (vehicle theft). *See also* Rucker Johnson & Steven Raphael, *How Much Crime Reduction Does the Marginal Prisoner Buy?*, 55 J.L. & ECON. 275 (2012) (finding estimates of similar sizes using a different econometric instrument). This paper also documents a decline in these estimates over time, suggesting that the estimates above may be too large (in absolute magnitude) in today's criminal justice environment. Johnson and Raphael's estimate of the elasticity of all violent crime to prison size declines by an order of magnitude when they move from studying 1978–1990 to 1991–2004, implying that the crime-fighting effect of the marginal prisoner has declined substantially over time. *Id.* at 302. Their estimate for the marginal effect of a prisoner on murders is a marginally significant -0.006, for rape it is -0.02, and for assault it varies between -0.4 and 0.4 depending on specification in the period 1991–2004. *Id.* at 301 tbl.8; *see also* Daniel S. Nagin, *Deterrence in the Twenty-First Century*, 42 CRIME & JUST. 199, 201 (2013).

cally, we ask: When people who commit violent crimes (especially homicide) are released from prison, how frequently do they reoffend (especially via a new homicide or another violent crime)? The evidence we assemble below is merely suggestive. The core limitation is that we can only evaluate the post-release behavior of people who have, in fact, been released from incarceration. But prison terms and release decisions are not random, and individuals released after ten years surely differ from those released after thirty years and from those never released at all. So, we cannot assume that those still incarcerated would (if released) behave exactly how those who have been released behave under the same conditions. It is worth remembering that with almost any study of postrelease recidivism, the people studied are not a random sample of the prison population but a sample of those who were released: people who did not receive life sentences, who may have behaved well in prison, who have likely served substantial portions of their terms, and who are probably more likely to have "aged out" of violent offenses than those more recently admitted.[75] Thus, it is difficult and perilous to extrapolate from the crime rates observed among those released under present policies to the potential crime rates one would observe if the government released a broader group of people from prison, or released everyone sooner. More time in prison might

75 The more that release decisions relate to a releasee's likelihood of reoffending, the less representative of the broader prison population the released population is. This implies that if past efforts to predict recidivism have been relatively unsuccessful, then these offenders are more representative of a broader population. AUSTIN ET AL., *supra* note 2, at 23–24, notes that there is mixed evidence that the likelihood of subsequent offense is identifiable at all. *See id.* ("[A]ttempts to correctly predict the violent recidivist are virtually impossible regardless of the make-up of individual risk and protective factors available to researchers and policymakers." (quoting Alex R. Piquero et al., *Violence in Criminal Careers: A Review of the Literature from a Developmental Life-Course Perspective*, 17 AGGRESSION & VIOLENT BEHAV. 171, 177 (2012)); *see also* Terrie E. Moffitt, *Adolescence-Limited and Life-Course-Persistent Antisocial Behavior: A Developmental Taxonomy*, 100 PSYCHOL. REV. 674, 675 (1993) ("Persistent, stable antisocial behavior is found among a relatively small number of males whose behavior problems are also quite extreme [and often criminal]."). And longitudinal cohort studies have found that a tiny portion of the population commit the majority of crimes. *See* Orjan Falk et al., *The 1% of the Population Accountable for 63% of All Violent Crime Convictions*, 49 SOC. PSYCHIATRY & PSYCHIATRIC EPIDEMIOLOGY 559, 559 (2014) (finding that 1% of Swedes accounted for 63% of all convictions); Marvin E. Wolfgang, *Crime in a Birth Cohort*, 117 PROC. AM. PHIL. SOC'Y 404, 407–08 (1973) (finding that 6% of those studied were responsible for 52% of all offenses committed by the cohort, including the more serious crimes). There is therefore a small sample size from which to learn about recidivists, adding to the difficulty of predicting recidivism. For a discussion of some of the complexity (both moral and computational) surrounding attempts to mathematically quantify this risk, see Sonja B. Starr, *Evidence-Based Sentencing and the Scientific Rationalization of Discrimination*, 66 STAN. L. REV. 803, 842–50 (2014); and *Algorithms in the Criminal Justice System: Pre-Trial Risk Assessment Tools*, ELECTRONIC PRIVACY INFO. CTR., https://epic.org/algorithmic-transparency/crim-justice (last visited Mar. 11, 2020); and see also AUSTIN ET AL., *supra* note 2, at 34 n.9 ("Recommending against the use of a violent charge as a tool for predicting future offending opens the very large question of how and whether to make such predictions. The strongly situational nature of violence argues against individualized assessments of risk that aim to measure behavioral predispositions to violence.").

discourage future crime through rehabilitation or specific deterrence, but it could also encourage future crime by those imprisoned (for example, by making reentry into society more difficult).[76]

We will return to these causal-inference challenges in the course of our discussion below. These important concerns notwithstanding, we believe that recidivism data provide useful information that can allow policymakers to at least roughly understand the potential stakes of their decisions. Moreover, there is no necessarily better way to understand those stakes; although there are different approaches, each can be informative. For instance, various studies have considered the net effects on crime rates (or on rates of particular crimes like murder) of changes in the overall prison population.[77] These studies lump together general deterrence effects (including on first-time offenders) with recidivism effects (via incapacitation and other channels).[78] But even when one does not attempt to separate these channels, causal inference is challenging—prison population sizes are not random either, and the policy changes or jurisdictional differences that influence them are often intertwined with other social or policy factors that can make their effects hard to isolate.[79]

Most recidivism research uses broad definitions of recidivism (for example, rearrest for any crime) and addresses broad groups of releasees (for example, all individuals released in a given year).[80] In such investigations, the vast majority of the recidivism that researchers observe is relatively minor

76 *See* PAUL GENDREAU ET AL., DEP'T OF THE SOLICITOR GEN. CAN., THE EFFECTS OF PRISON SENTENCES ON RECIDIVISM 15 (1999) (finding that spending more time in prison was associated with slight increases in recidivism); Daniel P. Mears et al., *Recidivism and Time Served in Prison*, 106 J. CRIM. L. & CRIMINOLOGY 83, 122–23 (2016) (finding that marginal increases to sentences under one year are associated with increased recidivism, but marginal increases to sentences over one year have a negative or ambiguous relationship with recidivism); Evan K. Rose & Yotam Shem-Tov, Does Incarceration Increase Crime? 1 (May 29, 2019) (unpublished manuscript), https://yotamshemtov.github.io/files/Yotam-ShemTov_JMP.pdf ("[O]ne year of incarceration reduces the likelihood of committing new assault, property, and drug offenses within three years of conviction by 38%, 24%, and 20%, respectively.").

77 *See, e.g.*, Tomislav V. Kovandzic & Lynne M. Vieraitis, *The Effect of County-Level Prison Population Growth on Crime Rates*, 5 CRIMINOLOGY & PUB. POL'Y 213 (2006) (examining the relationship between prison population growth and crime rates in 58 Florida counties); Levitt, *supra* note 74, at 323 (estimating the effect of prison population on crime using prison overcrowding litigation as an instrumental variable).

78 Kovandzic & Vieraitis, *supra* note 77, at 214 (noting deterrent and incapacitation effects); Levitt, *supra* note 74, at 321 (describing how "[i]ncreased prison populations can reduce crime through either deterrence . . . or incapacitation").

79 *See* David S. Abrams, *The Imprisoner's Dilemma: A Cost-Benefit Approach to Incarceration*, 98 IOWA L. REV. 905, 918–19 (2013); Donohue, *supra* note 74, at 274–79 (showing that using different econometric approaches or assumptions in different time periods produces highly varied results).

80 SENTENCING PROJECT, STATE RECIDIVISM STUDIES (2010), https://www.prisonpolicy.org/scans/sp/inc_StateRecidivismStudies2010.pdf (documenting ninety-nine recidivism studies using a variety of definitions of recidivism, often without denoting the offense committed, and often addressing a broad group of releasees (e.g., all felons)).

and nonviolent crime, simply because minor and nonviolent crime is much more common than serious or violent crime.[81] But criminal justice policy is driven by fear of serious, violent crime—especially homicide. Recent criminal justice reform debates revolve around nonviolent offenses, which are politically low-hanging fruit.[82] In contrast, policymakers and the public worry that reducing violent-crime incarceration will lead to more violent crime.[83] Estimates of the social costs of violent crime tend to be orders of magnitude larger than the costs of property crimes; homicide in particular imposes a very high social cost.[84] Accordingly, a detailed understanding of violent-crime recidivism, differentiated by past-offense and recidivism-offense type, may help policymakers understand whether these fears are justified.

The remainder of this Article seeks to contribute by providing a critical literature review of what we know about recidivism rates for individuals incarcerated for different categories of violent offenses. We supplement these existing data by providing new evidence and analysis of recidivism rates by offense type. Throughout the Article we focus on homicide offenders and homicide recidivism because homicide cases are central to shaping the long-term prison population and because fear of homicide is a key public-safety concern. We also emphasize the roles of age and time served in understanding outcomes; these factors clarify the implications of the extremely long prison sentences imposed for homicide and of reforms that might reduce them.

II. Recidivism Estimates

In this Part, we explore the state of existing research on violent-crime recidivism. We begin in Section A by introducing some challenges with measuring recidivism—including inconsistent definitions across studies, differing release populations, and the lack of high-quality longitudinal data. These considerations make drawing broad inferences regarding recidivism patterns across studies difficult. Nonetheless, in Section B, we review the findings of

81 *See, e.g.*, Patrick A. Langan & David J. Levin, Bureau of Justice Statistics, U.S. Dep't of Justice, Recidivism of Prisoners Released in 1994, at 4 tbl.3 (2002), https://bjs.gov/content/pub/pdf/rpr94.pdf (finding that of the crimes committed by recidivists over 70% were nonviolent offenses).

82 Erik Eckholm, *How to Cut the Prison Population (See for Yourself)*, N.Y. Times (Aug. 11, 2015), https://www.nytimes.com/2015/08/12/upshot/how-to-cut-the-prison-population-see-for-yourself.html (describing bipartisan support for criminal justice reform, particularly for nonviolent offenders).

83 Perception and fear of crime are not well aligned with trends in violent-crime frequency. *See, e.g.*, Gramlich, *supra* note 27.

84 Translating the cost of crime into dollar amounts is challenging and leads to a wide range of estimates. For instance, estimates of the social cost per murder range from about $4.3 million to about $11.5 million, while the cost of larceny ranges from about $300 to about $900. *Compare* Donohue, *supra* note 74, at 287 tbl.9.4 (citing Ted R. Miller et al., Nat'l Inst. of Justice, U.S. Dep't of Justice, Victim Costs and Consequences: A New Look 9–17 (1996)), *with id.* at 292 tbl.9.6 (citing Mark A. Cohen et al., *Willingness-to-Pay for Crime Control Programs*, 42 Criminology 89, 90, 96–99 (2004)).

existing studies that focus on violent-crime recidivism, paying particular attention to those that examine repeat serious forms of homicide.

A. Challenges with Measuring Recidivism

One challenge in documenting variation and trends in recidivism rates across geographies and time is that historically the definition of "recidivism" has varied across these dimensions. In fact, decades ago, Michael Maltz documented nine different definitions of recidivism in a survey of ninety studies of recidivism in the United States.[85] In theory, policymakers would like to know how frequently released offenders commit new criminal offenses (or offenses of a given type). But there are no comprehensive data collected on crime commission—the vast majority of crime that people commit goes unreported to police and is unobservable by researchers.[86] This problem extends even to homicide. Homicides are usually reported to police, but more than a third of them go unsolved or do not end in a conviction, which means they would not appear in individual recidivism data.[87]

As a proxy for actual crime commission, most studies must consider rearrest, reconviction, return-to-prison, and/or new-crime reincarceration rates.[88] Rearrest rates classify a person as a recidivist if the person is arrested over the course of a specific follow-up period. Reconviction rates classify a person as a recidivist if the person has been convicted of a new crime. Return-to-prison rates classify a person as a recidivist when an arrest results in a return to prison through either a new conviction or a technical violation of

85 MICHAEL D. MALTZ, RECIDIVISM 61–62 (1984).

86 *See* LYNN LANGTON ET AL., BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, VICTIMIZATIONS NOT REPORTED TO THE POLICE, 2006–2010, at 4 tbl.1 (2012) (finding that 58% of crimes were unreported between 2006 and 2010); RACHEL E. MORGAN & BARBARA A. OUDEKERK, BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, CRIMINAL VICTIMIZATION, 2018, at 8 tbl.5 (2019), https://bjs.gov/content/pub/pdf/cv18.pdf (finding that, in 2018, 57% of violent crimes and 66% of property crimes went unreported); *see also* Roger Tourangeau & Madeline E. McNeeley, *Measuring Crime and Crime Victimization: Methodological Issues*, *in* NAT'L RESEARCH COUNCIL, MEASUREMENT PROBLEMS IN CRIMINAL JUSTICE RESEARCH: WORKSHOP SUMMARY 10, 10 (John V. Pepper & Carol V. Petrie eds., 2003) (observing that the nature of crime victimization leads to low rates of reporting).

87 *Clearances*, FED. BUREAU INVESTIGATION, https://ucr.fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/topic-pages/clearances (last visited Mar. 11, 2020) (reporting that 45.5% of violent crimes and 17.6% of property crimes were cleared by arrest or exceptional means and also noting that 62.3% of murders and manslaughters were cleared).

88 *See, e.g.*, MARIEL ALPER ET AL., BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, 2018 UPDATE ON PRISONER RECIDIVISM: A 9-YEAR FOLLOW-UP PERIOD (2005–2014), at 3 (2018), https://bjs.gov/content/pub/pdf/18upr9yfup0514.pdf (stating that "[r]ecidivism measures require . . . a measure of failure . . . , such as a subsequent arrest, conviction, or return to prison"); CRIMINAL JUSTICE POLICY & PLANNING DIV., CONN. OFFICE OF POLICY & MGMT., RECIDIVISM, 2017-RELEASE COHORT 1 (2020), https://portal.ct.gov/-/media/OPM/CJPPD/CjResearch/RecidivismStudy/2020-Recidivsm-Report-2017-Cohort.pdf ("OPM typically considered four measures of recidivism including 1) new arrests[,] 2) new convictions[,] 3) returns-to-prison for any reason, and 4) returns-to-prison to begin a new prison sentence.").

release conditions (such as failing a drug test or missing a parole appointment). New-crime reincarceration rates classify a person as a recidivist if the person has a new conviction with a disposition of a prison sentence.[89]

The broadest of these recidivism measures—the rearrest rate—is still a noisy and likely downwardly biased estimate of the true frequency at which individuals reoffend because many crimes go unreported or unsolved and not all arrests correctly identify the perpetrator of a criminal offense.[90] While reconviction, return-to-prison, or new-crime reincarceration rates presumably reduce the noise generated by arrests of people who did not offend, these measures may exacerbate the undercounting of unpunished or unreported offenses.[91] Reconviction and new-crime reincarceration rates might be especially downwardly biased measures of recidivism for conditionally released individuals, as some jurisdictions may choose to address new offenses by revoking parole rather than by bringing a new charge.[92] This no-new-charge bias may be less common for more severe forms of violent reoffense such as homicide for obvious reasons. The discrepancy between offense rates and reported crime rates varies by offense type. For example, violent-crime report rates are higher than property-crime report rates, and homicide crimes are more likely to lead to arrests.[93] Reported rates of recidivist homicide crimes are thus probably more accurate than reported rates of other forms of recidivism.[94]

---

89 *See* MATTHEW R. DUROSE ET AL., BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, RECIDIVISM OF PRISONERS RELEASED IN 30 STATES IN 2005: PATTERNS FROM 2005 TO 2010, at 14–15 (2014), https://www.bjs.gov/content/pub/pdf/rprts05p0510.pdf. For this study, we loosely follow the BJS definitions for recidivism with the exceptions noted in the text above. To avoid confusion, we highlight the parole aspect when we discuss the "return-to-prison" measure. Our work will focus on new-crime reincarceration rates.

90 Goldstein, *supra* note 12 (explaining that studies based on "rearrests, reconvictions, and returns to prison . . . leave out an entire group of former prisoners: those who break the law but don't get caught").

91 *See* LOUIS REEDT ET AL., U.S. SENTENCING COMM'N, RECIDIVISM AMONG FEDERAL DRUG TRAFFICKING OFFENDERS 4 (2017), https://www.ussc.gov/sites/default/files/pdf/research-and-publications/research-publications/2017/20170221_Recidivism-Drugs.pdf (observing that reconviction and reincarceration rates may undercount for "reasons relating to procedural safeguards . . . , lack of sufficient evidence . . . , and prosecutorial or judicial resource limitations").

92 *See* PEGGY BURKE ET AL., PEW CTR. ON THE STATES, WHEN OFFENDERS BREAK THE RULES: SMART RESPONSES TO PAROLE AND PROBATION VIOLATIONS 4 (2007), https://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2007/%20when20offenders20break20the20rulespdf.pdf. ("Sometimes the criminal justice system processes new arrests of people on probation or parole as condition violations rather than new crimes.").

93 John Gramlich, *Most Violent and Property Crimes in the U.S. Go Unsolved*, PEW RES. CTR. (Mar. 1, 2017), https://www.pewresearch.org/fact-tank/2017/03/01/most-violent-and-property-crimes-in-the-u-s-go-unsolved (showing that violent victimizations are more likely to be reported than property victimizations); *cf. Clearances*, *supra* note 87 (showing a higher clearance rate by any means of "murder offenses" compared with other violent crimes).

94 *See* JENNIFER L. TRUMAN & RACHEL E. MORGAN, BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, CRIMINAL VICTIMIZATION, 2015, at 4 tbl.2, 6 tbl.4 (2016), https://bjs.gov/content/pub/pdf/cv15.pdf (reporting the greatest increase in crime reporting from 2014

Beyond their general noisiness, all of these measures probably overstate racial differences in recidivism because they depend on policing and other criminal justice policies.[95] People of color, especially black men, are subject to more intensive policing due in part to the allocation of police resources.[96] For this reason, the ratio of arrests (and other downstream outcomes like convictions) to true crimes is likely higher for people of color than for white people, although the magnitude of this disparity is hard to estimate precisely because true crime rates are unobserved.[97] If this is so, then because of the correlations between crime type and race, it would mean that recidivism rates may appear artificially high for those previously convicted of violent crimes than for those previously convicted of other crimes. Indeed, even aside from the racial-disparity issue, if police simply prioritize addressing violent crime over other crimes and allocate resources to neighborhoods and investigations accordingly, one would expect violent crime to be disproportionately represented (versus other crimes) in recidivism data.

The gap between the rearrest rate and other measures of recidivism is substantial and varies somewhat over time, including for different cohorts of individuals selected using the same sample frame. One possible explanation for these differences could be that the detection of recidivism is also dependent on criminal justice policy choices that may vary over time, such as supervision intensity.[98] In the most recent data from the Bureau of Justice

to 2015 for murder and showing serious violent crime has the best chance of being reported).

95 *See* NAT'L ACADS. OF SCI., ENG'G & MED., PROACTIVE POLICING: EFFECTS ON CRIME AND COMMUNITIES 251 (David Weisburd & Malay K. Majmundar eds., 2018) ("The high rates at which non-Whites are stopped, questioned, cited, arrested, or injured by police present some of the most salient criminal justice policy phenomena in the United States. . . . [B]ecause many proactive policing strategies by design increase the volume of interactions between police and the public, such strategies may increase the overall opportunity for problematic interactions that have disparate impacts."); Katie Ropes Berry et al., *The Intersectional Effects of Race and Gender on Time to Reincarceration*, 37 JUST. Q. 132, 150–51 (2020) ("[M]easures of re-arrest or reincarceration obscure the effects of racism and racial bias in community policing and surveillance.").

96 *See, e.g.*, NAT'L ACADS. OF SCI., ENG'G & MED., *supra* note 95, at 292 ("The disproportionate representation of Blacks among drug arrestees appeared to be due in large part to a focus on crack cocaine and a focus of resources on buy-busts occurring outside.").

97 *See* Sonja B. Starr, *Testing Racial Profiling: Empirical Assessment of Disparate Treatment by Police*, 2016 U. CHI. LEGAL F. 485, 504–15 (providing a literature review of disparity in policing behavior by race); *see also* John J. Donohue III & Steven D. Levitt, *The Impact of Race on Policing and Arrests*, 44 J.L. & ECON. 367, 371–72 (2001) ("The . . . difficulty is that, unlike arrest data, crime data are not available by race since the race of the offender is often not observed."); Roland G. Fryer, Jr., *An Empirical Analysis of Racial Differences in Police Use of Force*, 127 J. POL. ECON. 1210, 1210–16 (2019).

98 Jennifer L. Doleac, *Study After Study Shows Ex-Prisoners Would Be Better Off Without Intense Supervision*, BROOKINGS INSTITUTION (July 2, 2018), https://www.brookings.edu/blog/up-front/2018/07/02/study-after-study-shows-ex-prisoners-would-be-better-off-without-intense-supervision ("One of the most striking findings [from a review of prisoner-reentry literature] was that *reducing* the intensity of community supervision for those on probation or parole is a highly cost-effective strategy [to reduce recidivism].").

Statistics, 68% of all released individuals were rearrested within three years, 50% returned to prison, 45% were reconvicted, and 22% had a new-crime reincarceration.[99] A similar pattern holds for prisoners convicted of violent crimes: 62% were rearrested within three years, 45% returned to prison, 37% were reconvicted, and 20% had a new-crime reincarceration.[100] However, it is still unclear how the different measures of recidivism relate to each other in more precisely defined offense and reoffense categories.

In addition, data on recidivism rates (however defined), especially once they are disaggregated by initial and reoffense categories, are sparse and inconsistent.[101] This is especially so when we are seeking to understand a rare outcome (homicide reoffense) among a small subgroup (individuals released after having been convicted of homicide). Most recidivism studies contain small numbers of homicide offenders to begin with, and it is always harder to separate signal from noise when we are trying to predict rare outcomes.[102] Thus, one has to be careful in drawing comparisons between rates without taking into account raw numbers—for example, if a repeat-homicide rate is 1% in one subgroup and 2% in another, this could represent a large

99 AUSTIN ET AL., *supra* note 2, at 25 tbl.4 (citing DUROSE ET AL., *supra* note 89, at tbl.8). This pattern is consistent with what we observe in previous release cohorts. In the 1994 BJS cohort, 68% of all released individuals were rearrested within three years, 52% returned to prison, 47% were reconvicted, and 25% had new-crime reincarcerations; for prisoners convicted of violent crimes, 62% were rearrested within three years, 40% were reconvicted, 49% returned to prison, and 20% had new-crime reincarcerations. *See* LANGAN & LEVIN, *supra* note 81, at 3 tbl.2, 8 tbl.9. In the 1983 BJS cohort, 63% of all released individuals were rearrested within three years, 47% were reconvicted, 41% returned to prison; for prisoners convicted of violent crimes, 60% were rearrested within three years, 42% were reconvicted, and 37% returned to prison. *Id.* In the 1983 study it is impossible to distinguish new-crime reincarceration from other returns to prison. ALLEN J. BECK & BERNARD E. SHIPLEY, BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, RECIDIVISM OF PRISONERS RELEASED IN 1983, at 3 tbl.2, 5 tbl.8 (1989), https://www.bjs.gov/content/pub/pdf/rpr83.pdf.

100 AUSTIN ET AL., *supra* note 2, at 25 tbl.4; DUROSE ET AL., *supra* note 89, at 8 tbl.8.

101 *See* REEDT ET AL., *supra* note 91, at 4 (describing the effects of "significant gaps in reporting of dispositions following an arrest"); Katherine Barrett & Richard Greene, *Where's the Data? What the Government* Isn't *Tracking*, GOVERNING (Mar. 2019), https://www.governing.com/columns/smart-mgmt/gov-missing-government-data.html ("[T]here is [not] a jurisdiction in the country . . . that has even a quarter of the recidivism data that they want and need.") (quoting Adam Gelb, president and CEO of the Council on Criminal Justice); *see also* Amy Bach, Opinion, *Missing: Criminal Justice Data*, N.Y. TIMES (Mar. 21, 2018), https://www.nytimes.com/2018/03/21/opinion/missing-criminal-justice-data.html (describing the lack of criminal justice data in the U.S. and how it impacts policymakers).

102 *E.g.*, Liem et al., *supra* note 11, at 2630 (studying recidivism among ninety-two paroled homicide offenders); Albert R. Roberts et al., *Recidivism Among Four Types of Homicide Offenders: An Exploratory Analysis of 336 Homicide Offenders in New Jersey*, 12 AGGRESSION & VIOLENT BEHAV. 493, 494 (2007) (studying a "random sample of 336 homicide offenders who were released between the years 1990 and 2000 from the New Jersey Department of Corrections").

difference, but depending on the sample size it might really only represent a difference of a couple of individual cases, easily produced by chance.[103]

Another definitional consistency issue arises in the classification of underlying offenses. When trying to understand recidivism rates across crime categories, offenses must be defined comparably. Given the variation in the underlying criminal statutes and reporting norms, data reports and studies do not always define offenses in precisely the same manner.[104] Most relevant to the focus of our work is that recidivism studies often report different categories of crimes as homicides.[105] Homicide will be variably defined as some combination of murder, negligent manslaughter, nonnegligent manslaughter, and other lesser homicide offenses. Below, we identify the definitions of offenses as they are reported in the underlying data or study; these definitions are important to keep in mind when drawing comparisons.[106]

B. Recidivism Estimates Vary Across Studies

Subject to the caveats above, in this Section, we review the limited data and analysis that exist on recidivism among those incarcerated for serious violent offenses, particularly homicide. First, we consider general recidivism rates (i.e., not confined by the type of reoffense). Taken as a whole, these data suggest that those incarcerated for serious violent offenses reoffend at relatively low rates compared to other released individuals.[107] However, the rate at which homicide offenders recidivate varies across studies and over time. We summarize the findings of existing research in Table 4 and consider the individual studies in turn below. Table 4 also reports, when the

103 *Cf.* Laura Balzer et al., *Estimating Effects with Rare Outcomes and High Dimensional Covariates: Knowledge Is Power*, 5 EPIDEMIOLOGIC METHODS 1, 2–3 (2016); Jorge Faber & Lilian Martins Fonseca, *How Sample Size Influences Research Outcomes*, DENTAL PRESS J. ORTHODONTICS July–Aug. 2014, at 27, 27 ("In recent years a growing concern has overwhelmed the scientific community in the healthcare area: Sample size calculation. . . . Too small a sample may prevent the findings from being extrapolated . . . ."); A. Hackshaw, Editorial, *Small Studies: Strengths and Limitations*, 32 EUR. RESPIRATORY J. 1141, 1142 (2008) ("[A] major limitation of small studies is that they can . . . over-estimate the magnitude of an association. . . . After the smaller studies were reported, there was much hope for thalidomide . . . . However, the large trial did not show any benefit.").

104 Goldstein, *supra* note 12, at 3. *Compare* Liem et al., *supra* note 11, at 2646 (limiting its classification of homicide to first-degree, second-degree and third-degree murder and voluntary manslaughter as they are defined in Pennsylvania), *with* LANGAN & LEVIN, *supra* note 81, at 15 (including murder, nonnegligent manslaughter, and negligent manslaughter in homicide rates, and defining each independently of any specific jurisdiction).

105 *See infra* Section II.B.

106 Data integration issues also present a challenge. While many statistics are eventually aggregated to present national statistics, data collection and management is often done at the local level. *50-State Report*, *supra* note 8, at 1–2. As such, tracking mobile populations can be challenging. In the studies that we discuss in what follows, recidivism events in which the two offenses occur in different states are systematically missed.

107 *See* AUSTIN ET AL., *supra* note 2, at 23–24 ("[P]eople who have perpetuated violence . . . have relatively low rates of recidivism . . . . The recidivism rates among those incarcerated for violent offenses are lower than those incarcerated for other offenses.").

TABLE 4: SUMMARY OF RECIDIVISM STUDIES WITH POPULATIONS RELEASED AFTER INCARCERATION FOR VIOLENT OFFENSES[108]

				Released After Imprisonment for Offense of Type					
				Violent			Homicide		
Study (Release Cohort)	Recidivism Definition	Homicide/ Murder Definition	Study Size	Any	Violent	Homicide/ Murder	Any	Violent	Homicide/ Murder
National									
BJS (2005)	5y RA	M; Neg MS; MS	404,368	71.3	33.1	1.1	51.2	21.7	2.1
BJS (1994)	3y RA	M; Neg MS; MS	272,111	61.7	27.5	1.1	40.7	16.7	1.2
BJS (1983)	3y RA	M; MS	108,580	59.6	30.4	2.8	42.1	21.6	6.6[c]
Sentencing Comm. (2005)	3y RA	n/a	25,431	60.2	45.3	1.8	n/a	n/a	n/a
State									
California (1995–2010)	0-15y NCR[a]	M	860	n/a	n/a	n/a	0.6	n/a	0.0
Louisiana (n/a)	3y NCR	M	148	n/a	n/a	n/a	1.5[d]	n/a	n/a
Maryland (2012–2018)	0-5y NI	M[b]	190	0.4	0.0	0.0	n/a	n/a	n/a
Michigan (2007–2010)	3y NCR	M; MS	820	n/a	n/a	n/a	5.7	1.5	0.2
Michigan(1986–1999)	3y NCR	M; Neg MS; MS	73,431	14.6[e]	6.5[e]	n/a	7.0	2.7[e]	0.5
New York (1985–2012)	3y NCR	M; MS; Neg MS	665,118	13.8	7.2	0.4	6.0	3.0	0.3
New Jersey (1990–2000)	5y+ NCR	M; MS; Neg MS	336	n/a	n/a	n/a	32.5[f]	9.9[f]	0.0
Pennsylvania (2008)	3y RA	n/a	13,814	45.6	13.1	n/a	n/a	n/a	n/a

108 Key for the table: "RA" is rearrest; "NCR" is new-crim reincarceration; "NI" is new imprisonment; "M" is murder; "MS" is nonnegligent manslaughter; "Neg MS" is negligent manslaughter. Indicated notes: (a) Analysis limited to felony new-crime reincarcerations. (b) In the Maryland sample about 80% of the sample was murder; we do not classify the remaining 20%. (c) BJS (1983) defines homicide differently for the released sample and rearrest offense; the released population is as indicated in the table (M; Neg MS), but the reimprisonment offense is broader (M; MS; Neg MS). (d) In Louisiana the studied

data exist, recidivism rates broken down by reoffense category. The frequency at which individuals released after homicide recidivated through another homicide also varies across studies, ranging from 0% to about 7%, depending on the definition of recidivism, the types of crime included in the homicide measure (for example, whether manslaughter is included), and the relevant population. However, almost every study finds repeat-homicide recidivism rates at or below 1%. This pattern is consistent with the possibility that individuals released after serving time for a homicide offense are more likely to recidivate by committing homicide relative to other releasees, but that homicide recidivism events remain rare even for this population.

---

population was pardoned and may be less representative of the general population than in the other studies. (e) Violent crimes in this study are labelled as crimes against persons and include homicide, sex crimes, assault, and robbery. (f) The table from the underlying study implies a smaller sample of 326 people for this category. General notes: (1) n/a indicates we are unable to calculate a rate from the data supplied in the published study; (2) years with dashes (e.g., 0–15) or + indicate variable-length follow-up periods; (3) study size reports total population considered in the publication, not necessarily only individuals released after violent crimes. Individual studies are discussed in more detail below. The citations for the studies we review include the following: "BJS (2005)": MATTHEW R. DUROSE ET AL., BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, RECIDIVISM OF PRISONERS RELEASED IN 30 STATES IN 2005: PATTERNS FROM 2005 TO 2010—SUPPLEMENTAL TABLES, at 2 tbl.2 (2014), https://www.bjs.gov/content/pub/pdf/rprts05p0510_st.pdf; "BJS (1994)": LANGAN & LEVIN, *supra* note 81, at 9 tbl.10; "BJS (1983)": BECK & SHIPLEY, *supra* note 99, at 6 tbl.9 (1989); "Sentencing Comm. (2005)": KIM STEVEN HUNT ET AL., U.S. SENTENCING COMM'N, RECIDIVISM AMONG FEDERAL VIOLENT OFFENDERS 3, 18, 23, 55 (2019), https://www.ussc.gov/sites/default/files/pdf/research-and-publications/research-publications/2019/20190124_Recidivism_Violence.pdf; "California (1995–2010)": ROBERT WEISBERG ET AL., STANFORD CRIMINAL JUSTICE CTR., LIFE IN LIMBO: AN EXAMINATION OF PAROLE RELEASE FOR PRISONERS SERVING LIFE SENTENCES WITH THE POSSIBILITY OF PAROLE IN CALIFORNIA 3, 17 (2011); "Louisiana (n/a)": Edward S. Shihadeh et al., *Recidivism in the State of Louisiana: An Analysis of 3- and 5-Year Recidivism Rates Among Long-Serving Offenders* 5 tbl.1 (Crime and Policy Evaluation Research Grp., 2013), http://www.lcle.la.gov/sentencing_commission/Resources/Recidivism.pdf; "Maryland (2012–2018)": Michael Millemann et al., *Digging Them Out Alive*, 25 CLINICAL L. REV. 365, 400–05 (2019); and Rosalie Dance et al., Unger v. Maryland *Four Years Later: Implications for Criminal Justice Reform*, MD. ALLIANCE FOR JUSTICE REFORM (Jan. 23, 2018), https://www.ma4jr.org/unger-update/; "Michigan (2007–2010)": BARBARA LEVINE & ELSIE KETTUNEN, CITIZENS ALL. ON PRISONS & PUB. SPENDING, PAROLING PEOPLE WHO COMMITTED SERIOUS CRIMES: WHAT IS THE ACTUAL RISK? 5 tbl.2 (2014); "Michigan (1986–1999)": BARBARA R. LEVINE, CITIZENS ALL. ON PRISONS & PUB. SPENDING, DENYING PAROLE AT FIRST ELIGIBILITY: HOW MUCH PUBLIC SAFETY DOES IT ACTUALLY BUY? A STUDY OF PRISONER RELEASE AND RECIDIVISM IN MICHIGAN 4, 21 & tbl.3 (2009); "New York (1985–2012)": SARA BRYANS, N.Y. STATE DEP'T OF CORR. & CMTY. SUPERVISION, 2012 INMATE RELEASES: THREE YEAR POST-RELEASE FOLLOW-UP 3 tbl.2, app. E.2 at 48–49 (2016), http://www.doccs.ny.gov/Research/Reports/2017/2012_releases_3yr_out.pdf; "New Jersey (1990–2000)": Roberts et al., *supra* note 102, at 504, 505 tbl.5; "Pennsylvania (2008)": NICOLLETE BELL ET AL., PA. DEP'T OF CORR., RECIDIVISM REPORT 2013, at 11 tbl.5, 21 tbl.13, 23 tbl.15 (2013), https://www.cor.pa.gov/About%20Us/Statistics/Documents/Reports/2013%20PA%20DOC%20Recidivism%20Report.pdf.

1. National Studies

There have been several national efforts to understand recidivism in the United States, for both state and federal prison populations.

a. BJS Studies

In a study conducted by the Bureau of Justice Statistics of 404,638 state prisoners released in 2005 ("BJS 2005") across thirty states,[109] 51.2% of prisoners whose most serious imprisonment offense was homicide were arrested within five years of their release from prison.[110] This rate is substantially lower than the average rearrest rate across all released prisoners, which the study reports is 76.6%. More generally, violent offenders have slightly lower average rearrest rates (71.3%) than property-crime offenders (82.1%), drug offenders (76.9%), or public-order offenders (73.6%).[111]

Overall rearrest rates might not be the type of recidivism that matters to those considering criminal justice policy reforms, however, since most arrests are for minor crimes. Violent crime (especially homicide) is much costlier to society,[112] and one might worry that people with violent or homicidal criminal histories are especially likely to recommit those specific offenses.[113] This fear finds mixed support in these BJS data. In the BJS 2005 sample, for example, there is some "stickiness" in reoffense type. Specifically, a higher percentage of released prisoners who had been incarcerated for homicide (defined to include murder, voluntary manslaughter, vehicular manslaughter, negligent manslaughter, nonnegligent manslaughter, unspecified manslaughter, and unspecified homicide) are rearrested for homicide (2.1%) compared to the average individual previously incarcerated for a violent offense (1.1%), property crime (0.8%), or drug/public-order offense (0.8%).[114] However, even so, this reoffense rate still means that 98% of individuals released after homicide convictions are not arrested for another homicide, and, perhaps just as importantly, those convicted of homicide are

109 DUROSE ET AL., *supra* note 89, at 1.

110 *Id.* at 8 tbl.8. This study included 7621 releasees (1.9% of the sample) whose most serious commitment offense prior to release was homicide. *See* DUROSE ET AL., *supra* note 108, at tbl.1.

111 DUROSE ET AL., *supra* note 108, at tbl.2.

112 JEREMY TRAVIS, NAT'L INST. OF JUSTICE, U.S. DEP'T OF JUSTICE, THE EXTENT AND COSTS OF CRIME VICTIMIZATION: A NEW LOOK 2 (1996) (explaining that the cost, per victimization, of a murder is $2,940,000, far higher than rape/sexual assault, robbery, assault, and burglary combined).

113 *E.g.*, Matt DeLisi et al., *Criminal Specialization Revisited: A Simultaneous Quantile Regression Approach*, 36 AM. J. CRIM. JUST. 73, 74 (2011); Jean Marie McGloin et al., *Aggregating to Versatility? Transitions Among Offender Types in the Short Term*, 49 BRIT. J. CRIMINOLOGY 243, 244 (2009); Shawn L. Schwaner, *Patterns of Violent Specialization: Predictors of Recidivism for a Cohort of Parolees*, 23 AM. J. CRIM. JUST. 1 (1998). *See generally* Taylor, *supra* note 5.

114 DUROSE ET AL., *supra* note 108, at tbl.2.

less likely than releasees in other categories to be rearrested for other violent crimes.[115]

The BJS 2005 study of prisoners is not the BJS's first attempt to conduct this kind of analysis. In 1994, 272,111 prisoners were released from prisons in fifteen states and recidivism events were tracked over three years ("BJS 1994").[116] As with the later study, prisoners released after convictions for homicide (defined as murder, voluntary manslaughter, vehicular manslaughter, negligent manslaughter, nonnegligent manslaughter, unspecified manslaughter, or unspecified homicide) are rearrested at a substantially lower rate (40.7%) than released prisoners generally (67.5%), and again, this offense-category population has the lowest rate of rearrest.[117] While the 2005 cohort of homicide releasees are rearrested for another homicide at a substantially higher rate than individuals released after serving time for other crimes, this is not the case for the 1994 cohort. In fact, homicide reoffenses occur at a rate of 1.2% for this cohort of homicide releasees, below the rate of homicide committed by people released after assault convictions (1.6%) or motor-vehicle-theft convictions (2.4%).[118] The rate of 1.2% is similar to the homicide rate for individuals with any prior violent-crime conviction (1.1%) and slightly above those with property-crime convictions (0.8%).[119]

BJS also tracked an earlier cohort of 108,580 people from a smaller set of eleven states after their release in 1983 ("BJS 1983").[120] For this sample, 62.5% of those released after incarceration for any crime are rearrested within three years of release.[121] Again, the overall rearrest rate is lower for people who had been convicted of either murder or negligent manslaughter (42.1%) than the rearrest rate for releasees convicted of violent crimes

115 *Id.*

116 LANGAN & LEVIN, *supra* note 81, at 1. Note that this is a shorter follow-up period than in the 2005 study. While in general longer follow-up periods will increase recidivism rates, studies of recidivism routinely conclude that the highest risk for reoffense comes soon after release and that those who do not recidivate for several years are unlikely to do so at all. *See generally* U.S. SENTENCING COMM'N, MEASURING RECIDIVISM: THE CRIMINAL HISTORY COMPUTATION OF THE FEDERAL SENTENCING GUIDELINES (2004), https://www.ussc.gov/sites/default/files/pdf/research-and-publications/research-publications/2004/200405_Recidivism_Criminal_History.pdf; Alfred Blumstein & Kiminori Nakamura, *Redemption in the Presence of Widespread Criminal Background Checks*, 47 CRIMINOLOGY 327, 331 (2009); Shawn D. Bushway et al., *The Predictive Value of Criminal Background Checks: Do Age and Criminal History Affect Time to Redemption?*, 49 CRIMINOLOGY 27, 29 (2011); Megan C. Kurlychek, *Enduring Risk? Old Criminal Records and Prediction of Future Criminal Involvement*, 53 CRIME & DELINQUENCY 64, 69 (2007); Megan C. Kurlychek et al., *Scarlet Letters and Recidivism: Does an Old Criminal Record Predict Future Offending?*, 5 CRIMINOLOGY & PUB. POL'Y 483, 489 (2006); Alfred Blumstein & Kiminori Nakamura, Extension of Current Estimates of Redemption Times: Robustness Testing, Out-of-State Arrests, and Racial Differences (Oct. 2012) (unpublished report), https://www.ncjrs.gov/pdffiles1/nij/grants/240100.pdf.

117 LANGAN & LEVIN, *supra* note 81, at 9 tbl.10.

118 *Id.*

119 *Id.*

120 BECK & SHIPLEY, *supra* note 99, at 1.

121 *Id.*

(59.6%), property offenses (68.1%), drug offenses (50.4%), or public-order offenses (54.6%).[122] However, for this sample, people released after incarceration for murder or negligent manslaughter reoffend through either murder, negligent manslaughter, or nonnegligent manslaughter at a rather substantial rate of 6.6%.[123]

Taken as a group, the BJS studies suggest that individuals released after serving homicide sentences generally reoffend at a lower rate than individuals released after committing other kinds of crimes.[124] However, drawing comparisons across these studies is challenging as the underlying microdata on which the studies rely are not readily publicly available,[125] the number of states contributing to the sample increases over time, and crime-category definitions and data quality vary across the cohorts. Additionally, the recidivism-by-most-serious-imprisonment-offense rates and types of postrelease arrest charges are not based on a consistent release-observation period across the studies (for example, the BJS 2005 study uses a five-year period while the BJS 1994 study uses a three-year period).[126] Thus, while the BJS studies

122 *Id.* at 5 tbl.8.

123 *Id.* at 6 tbl.9. This rate is much higher than the homicide rate exhibited by the next riskiest category of releasees (robbery offenders, 2.9% of whom subsequently committed homicide). However, we are cautious about comparing the outcomes of BJS 1983 to the more recent BJS studies for the following reasons: the sample is smaller, it came from an era with a different criminal justice environment, and it emerged from a time period in which homicide rates were substantially elevated compared to the more recent BJS studies. *See generally* ALEXIA COOPER & ERICA L. SMITH, BUREAU OF JUSTICE STATISTICS, U.S. DEP'T OF JUSTICE, HOMICIDE TRENDS IN THE UNITED STATES, 1980–2008, at 2 figs.1 & 2 (2011), https://bjs.gov/content/pub/pdf/htus8008.pdf; David H. Bayley & Christine Nixon, *The Changing Environment for Policing, 1985–2008*, NEW PERSP. POLICING 2–6 (Sept. 2010), http://www.ncjrs.gov/pdffiles1/nij/ncj230576.pdf (examining the changing of policing practices between 1985 and 2008). Additionally, the BJS sample from 1983 was limited to people whose underlying crime was murder and negligent manslaughter, whereas the later BJS studies use a broader definition of homicide that includes another category of crime—nonnegligent manslaughter. *Compare, e.g.*, BECK & SHIPLEY, *supra* note 99, at 6 tbl.9, *with* LANGAN & LEVIN, *supra* note 81, at 4 tbl.3 ("Homicide includes murder, nonnegligent manslaughter, and negligent manslaughter.").

124 This is in line with other research suggesting that individuals convicted of homicide are less likely than those convicted of violent crimes to be habitual criminal offenders. *See* Marieke Liem, *Homicide Offender Recidivism: A Review of the Literature*, 18 AGGRESSION & VIOLENT BEHAV. 19, 21 (2013).

125 *See* DUROSE ET AL., *supra* note 89, at 3.

126 The amount of time over which recidivism risk ought to be evaluated is a contentious topic, and, in any particular study, the choice is typically driven by data limitations. *See, e.g.*, Darci L. Bartosh et al., *Differences in the Predictive Validity of Actuarial Risk Assessments in Relation to Sex Offender Type*, 47 INT'L J. OFFENDER THERAPY & COMP. CRIMINOLOGY 422, 436 (2003) ("[T]he follow-up period allowed for in the current study was a limitation. Although a 5-year follow-up allows adequate time for reoffense, a longer period would have captured a more factual recidivism rate."). Even studies with long follow-up periods differ in their capture of recidivism trends. *See, e.g.*, Susanne Bengtson & Niklas Långström, *Unguided Clinical and Actuarial Assessment of Re-offending Risk: A Direct Comparison with Sex Offenders in Denmark*, 19 SEXUAL ABUSE 135, 147 (2007) (following up on released offenders

represent the largest cross section of criminal justice data available for analyzing recidivism rates by crime type, each cohort offers a unique perspective.

b. Sentencing Commission Study

In 2019, the U.S. Sentencing Commission released a report on criminal recidivism using a design similar to the approach of the BJS studies but focusing instead on the population released from federal, rather than state, prisons.[127] In particular, the Commission followed 25,431 individuals released from federal prison in calendar year 2005.[128] Of these federal releasees, 2596 had been serving sentences for violent offenses.[129] Most of the individuals in the sample (46.1%) had been convicted of robbery; only 3.2% (or 83 people) were released after serving sentences for homicide.[130] The Commission followed this cohort over eight years.

The Commission's analysis indicates that individuals whose last offense was violent are rearrested within the sample period of eight years 60.2% of the time, reconvicted 38.4% of the time, and returned to prison 34.3% of the time.[131] This compares unfavorably to individuals serving sentences for nonviolent crimes, who are rearrested within the sample period 39.8% of the time, reconvicted 23.3% of the time, and returned to prison 18.5% of the time.[132] The higher rates of reoffense among individuals convicted of violent crimes (versus nonviolent crimes) contrasts with the findings in the BJS state studies; these divergent results could be explained by the differing nature of violent offenses that fall under state and federal jurisdictions respectively.[133]

---

over the course of twenty years, using ten two-year follow-up periods); David Thornton et al., *Distinguishing and Combining Risks for Sexual and Violent Recidivism*, 989 ANNALS N.Y. ACAD. SCI. 225, 230 (2003) (following up on released offenders just once, nineteen years after their release from incarceration).

127 *See* HUNT ET AL., *supra* note 108, at 3.

128 *Id.*

129 *Id.* at 18.

130 *Id.* The remaining releases were after "[o]ther" violent offenses, including kidnapping, blackmail/extortion, child abuse, arson, and rioting, among others (32.4%); assault (11.1%); and sexual abuse (7.2%). *Id.*

131 *Id.* at 21.

132 *Id.*

133 Most violent crimes are state crimes. This suggests that violent offenses that result in federal incarceration are not representative of violent crime generally and may be more likely to be connected to organized crime, drugs, or other particularly harmful criminal behavior. *See* Daniel Richman, *The Past, Present, and Future of Violent Crime Federalism*, 34 CRIME & JUST. 377, 377, (2006) (noting that "[i]t has long been a truism that, in our federal system, episodic violent crime (street crime) is the province of state and local authorities"); *id.* at 393–400 (providing a history of federal violent-crime enforcement through tools like "drug trafficking offenses, gun offenses . . . [, and] racketeering laws such as the Racketeer Influenced and Corrupt Organization (RICO) statute" and the "Safe Street Violent Crimes Initiative targeting violent gangs and crimes of violence"); *id.* at 408 (exploring federal violent-crime enforcement post-9/11). The types of nonviolent offenses in federal criminal law are more serious and carry more significant penalties than state nonviolent

This study also provides insight into the age profile of recidivists conditional on the nature of the offense and shows a clear drop-off in criminal activity with age.[134] As in the BJS studies, the data indicate reoffense "stickiness"—that is, there is a tendency among releasees toward same-crime reoffending. Individuals in the sample released after previous violent offenses were more likely to be rearrested for violent crime (e.g., any violent crime, 45.3%; robbery, 15.1%; rape, 3.6%; homicide,[135] 1.8%) than nonviolent offenders (e.g., any violent crime, 23.6%; robbery, 1.9%; rape, 1.5%; homicide, 0.9%).[136] Unfortunately, the Commission's study does not provide enough granularity to examine recidivism rates by the offense for which individuals were previously incarcerated.[137]

2. State-Specific Studies

There is substantial variation across states regarding definitions of recidivism and violent crimes.[138] As we note below, there are also differences in terms of what data are publicly available. Both circumstances make it difficult to directly compare recidivism rates across states. This subsection discusses existing efforts that have been made by researchers and various state governments to understand recidivism patterns for individuals with histories of violent crime in a given state.[139] State-specific studies tend to be much smaller in terms of sample size, and results also vary a good deal. Roughly,

---

offenses. *See* GLENN R. SCHMITT & CASSANDRA SYCKES, U.S. SENTENCING COMM'N, OVERVIEW OF FEDERAL CRIMINAL CASES, FISCAL YEAR 2018 (2019), https://www.ussc.gov/sites/default/files/pdf/research-and-publications/research-publications/2019/FY18_Overview_Federal_Criminal_Cases.pdf (detailing the composition of federal cases). Therefore, it is not that surprising that federal nonviolent-crime recidivism rates are lower than state nonviolent-crime recidivism rates (much as we see with state violent crime).

134 For both violent and nonviolent offenders, individuals who are older upon release are rearrested at significantly lower rates. Violent offenders released at an age younger than twenty-six are rearrested at a 70.8% rate, HUNT ET AL., *supra* note 108, app. A at 49, and nonviolent offenders of the same age are rearrested at a 61.9% rate. *See id.* at 49. This rate declines modestly for violent offenders released in the 41–50 age range, reaching 59.3%, and then exhibits a dramatic drop-off to 34.5% for violent offenders who are released after age fifty. *Id.* at 49. The relationship between age and crime for nonviolent offenders is slightly more linear, dropping to about 30% for the 41–50 range, and then decreasing more substantially to 15.2% for the older-than-fifty group. *Id.* at 61.

135 Unfortunately, the specific crimes included by the Commission in the homicide category were not supplied in the documentation for the study.

136 HUNT ET AL., *supra* note 108, at 13 fig.2.8, 23 & fig.3.6.

137 *See id.* at 36 & fig.4.7 (breaking down rearrest rates based on whether an individual had a violent or nonviolent criminal history but not by particular offense).

138 *See* PEW CTR. ON THE STATES, STATE OF RECIDIVISM: THE REVOLVING DOOR OF AMERICA'S PRISONS 3 (2011), https://aci.az.gov/images/Recidivism/StateofRecidivism.pdf.

139 Data from Delaware are available to a more limited degree and so are omitted from our summary. *See, e.g.*, ANDREW HUENKE, STATISTICAL ANALYSIS CTR., DEL. CRIMINAL JUSTICE COUNCIL, RECIDIVISM IN DELAWARE: AN ANALYSIS OF OFFENDERS RELEASED IN 2012 THROUGH 2014, at 9 fig.8 (2018) (indicating that only eleven individuals were released after having committed homicide).

the data across these states and studies support the conclusion that older violent offenders who have served substantial prison sentences are seldom reimprisoned for new violent offenses.

a. California

In a study examining parole releases for prisoners serving life sentences with the possibility of parole in California, Robert Weisberg and coauthors discover that of the 860 murder-prisoners paroled by the parole board after 1995, only five had new-crime reincarcerations for any crime (less than 1%) and none recidivated through crimes potentially subject to life imprisonment,[140] indicating a lower recidivism rate than many other studies. One potential explanation for this difference is that the sample is restricted to individuals released on parole, and the parole board can use its discretion to release only those who appear at lower risk of recidivating.[141] For instance, paroled individuals in California were approximately fifty years old on average, and, if imprisoned for murder, they had already served about twenty years of their sentences.[142]

b. Louisiana

A study that documents recidivism patterns in Louisiana finds that long-serving released individuals recidivate after release infrequently.[143] This study focuses on individuals who fall under Louisiana's Act 790 provisions: 205 released individuals who have received prison sentences of thirty years or more, have served at least twenty years of their sentence, and are currently over the age of forty-five.[144] Of this group, 5.4% were recommitted for any new crime within three years of release.[145]

c. Maryland

In general, studies of recidivism following release have to be interpreted cautiously because people are released for a reason. Those released at a parole board's discretion (or through clemency) have generally convinced a

140 WEISBERG ET AL., *supra* note 108, at 17.

141 *See id.* at 7–10 (describing the parole board's decision-making process).

142 *Id.* at 5, 20 chart 14; *see also* Kathryne M. Young et al., *Predicting Parole Grants: An Analysis of Suitability Hearings for California's Lifer Inmates*, 28 FED. SENT'G REP. 268 (2016) (discussing the factors associated with granting parole in California).

143 Shihadeh et al., *supra* note 108.

144 *Id.* at 3–5.

145 *Id.* at 5. This study also examines recidivism among individuals who received pardons. While this population is not representative of the broader prison population, of the forty-five individuals pardoned after first-degree murders, only two people were recommitted for any new crime. *Id.* at 5 tbl.1. Of the 103 who were pardoned after second-degree murders, none was recommitted for a new crime. *Id.* Unfortunately, the study does not indicate the charges associated with these recommitments—or even whether they were violent in nature.

decisionmaker that they are low risk;[146] others have served the full sentence that a judge deemed appropriate for their crimes, and sentencing judges may often take perceived recidivism risk into account.[147] Occasionally, however, a seemingly "as-good-as-random" event leads to the sudden release of a number of people for reasons unrelated to the public-safety risk they pose[148]—and that creates the opportunity to study recidivism among people who have not been, in effect, selected for being low risk.[149]

One such event occurred in Maryland in 2012, when an appellate court found that an improper jury instruction used in 237 cases decided before 1980 was constitutionally flawed,[150] and thus ruled that these cases were eligible for resentencing.[151] Relitigating thirty-year-old cases proved difficult, so 190 out of these 237 individuals have been released since 2012 (as of August 16, 2018).[152] More than 80% had been serving time for murder.[153] Of this group only five individuals returned to prison in the intervening years for parole violations or for new crimes (about 3%), and only one person charged with any criminal act (a misdemeanor) postrelease.[154] None has returned to prison for a new murder conviction.[155]

Although these outcomes are encouraging, they are not especially surprising given the sample of releasees. After all, these 190 cases are not a random subset of all those incarcerated for murder or other serious offenses. Rather, they were at best an as-good-as-random subset of fairly old cases. These individuals were incarcerated mainly in their twenties and were between fifty-one and eighty-five when released, with an average age of sixty-four and an average time served of thirty-nine years.[156] Age and length of elapsed time since an individual's most recent criminal behavior are both factors that the criminology literature identifies as predictive of low recidi-

146 *See e.g.*, WEISBERG ET AL., *supra* note 108, at 7–10 (providing an example of one state parole board's decision-making process).

147 *See* Norman J. Finkel et al., *Recidivism, Proportionalism, and Individualized Punishment*, 39 AM. BEHAV. SCIENTIST 474, 480, 481 tbl.1 (1996) (finding, via experiments, that mock judges and juries dole out higher sentences when prosecutors argue that the likelihood of recidivism is high).

148 *See* Millemann et al., *supra* note 108, at 400–05 (arguing that the group granted appeals, and the ordering of appeals, was effectively random).

149 *See generally* JOSHUA D. ANGRIST & JÖRN-STEFFEN PISCHKE, MOSTLY HARMLESS ECONOMETRICS: AN EMPIRICIST'S COMPANION (2009) (highlighting the importance of randomization to identifying causal relationships); SCOTT CUNNINGHAM, CAUSAL INFERENCE: THE MIXTAPE (2020), https://www.scunning.com/causalinference_norap.pdf.

150 *See* Millemann et al., *supra* note 108, at 381.

151 Unger v. State, 48 A.3d 242, 262 (Md. 2012); *see also* JUSTICE POLICY INST., THE UNGERS, 5 YEARS AND COUNTING: A CASE STUDY IN SAFELY REDUCING LONG PRISON TERMS AND SAVING TAXPAYER DOLLARS 3 (2018).

152 Millemann et al., *supra* note 108, at 370.

153 JUSTICE POLICY INST., *supra* note 151, at 10.

154 *Id.* at 17; *see* Dance et al., *supra* note 108.

155 JUSTICE POLICY INST., *supra* note 151, at 17.

156 *Id.* at 10.

vism,[157] and the outcomes observed in this study are consistent with those findings.[158]

d. Michigan

In 2014, Citizens Alliance on Prisons and Public Spending (CAPPS) calculated recidivism rates for individuals who were paroled after being imprisoned for serious crimes in Michigan.[159] The resulting study reports that individuals who had committed homicide (defined as second-degree murder or manslaughter)[160] and were paroled between 2007 and 2010 are reimprisoned for any new crime at a lower rate (5.7%) than the average parolee (16.7%).[161] Of the 820 people incarcerated for either second-degree murder or manslaughter and released between 2007 and 2010, only two people (0.2%) returned to prison for new homicide crimes within three years, and only 1.5% were reincarcerated for violent offenses.[162] More than 99% of individuals released following homicide or sex-offense sentences did not return to prison within three years with new convictions for similar offenses.[163] These rates are low, but recall for comparison purposes that the national studies we discuss above present statistics across rearrest rates, which will naturally be higher, as not all rearrests result in new-crime reincarcerations.

The CAPPS study is particularly notable because it includes 2009, a year in which Michigan expanded the size of its parole board in an effort to increase the use of parole and reduce the state's corrections budget.[164] This expansion resulted in 13,508 paroled individuals, an increase of 2020 people over the previous year (a 17% increase), and over one thousand people more than in any other year in recent record.[165] Despite this increase in the rate

157 One longstanding and often cited relationship in criminology is the age-crime profile, i.e., that offense rates (for both property and violent crimes) typically peak in the late teenage years and then decline with age. This empirical relationship suggests that the older imprisoned population, which happens to be substantially composed of people in prison for violent acts, may be less likely to recidivate. *See* Leana A. Bouffard, *Age and Crime*, *in* 1 21ST CENTURY CRIMINOLOGY: A REFERENCE HANDBOOK 28 (J. Mitchell Miller ed., 2009); Travis Hirschi & Michael Gottfredson, *Age and the Explanation of Crime*, 89 AM. J. SOC. 552, 578 (1983).

158 In addition, this group received reentry services that may not be available to all individuals postrelease. Millemann et al., *supra* note 108, at 391.

159 *See* LEVINE & KETTUNEN, *supra* note 108.

160 In Michigan, first-degree murder triggers imprisonment for life without eligibility for parole. MICH. COMP. LAWS ANN. § 750.316 (West 2019). Those convicted of this crime are not part of the released sample.

161 *See* LEVINE & KETTUNEN, *supra* note 108, at 5 tbl.2 (5.7%), 3 tbl.1 (16.7% for 2007–10).

162 *Id.* at 5 tbl.2.

163 *Id.* at 2.

164 *Id.*

165 *Id.* at 3. The rate in 2009 was higher than any other year from 1998 to 2017, the most recent year published in the Michigan Department of Corrections's statistical

of release of these prisoners, recidivism rates did not increase.[166] The study provides similarly constructed rates for previous decades, documenting that, in the 1960s, prisoners who were released after serving sentences for homicide were reincarcerated within three years at a rate of 1.6% for any new sentence; in the 1970s, it was 3.4%; in the 1980s, it was 5.9% (and 0.4% for new homicide sentences); in the 1990s, it was 6.3% (1% for another homicide); and in the 2000s, it was 5.4% (0.5% for another homicide).[167] As with the Maryland data, the Michigan data indicate that low recidivism rates for individuals convicted of serious violent offenses appear to persist even when somewhat broader portions of the prison population are released. These data also provide less evidence of repeat offending within the same offense category than the previous studies do.[168]

e. New Jersey

In one study, Albert Roberts and coauthors randomly sample 336 homicide offenders released in the 1990s from the New Jersey Department of Corrections and track their outcomes for a minimum of five years.[169] Relative to other research, Roberts et al. analyze a much smaller sample of individuals and only consider people released after committing homicide (in this study, murder, felony murder, and negligent and nonnegligent manslaughter).[170] Although the article does not present a direct comparison group (i.e., nonviolent offenders) against which to contrast this population's reoffending behavior, it does furnish important information regarding the recidivism rate of individuals previously convicted of homicide. Of the 336 individuals considered, none recidivated via a subsequent homicide and only thirty (9%) had any violent reoffense recorded.[171] In a more recent study, Melanie-Angela Neuilly and collaborators follow 320 individuals released after serving sentences for homicide (defined similarly to the Roberts et al. study) over five years.[172] Of these releasees, 12% were reimprisoned for new violent offenses and none was reimprisoned for a new homicide.[173] Both of these

abstract. MICH. DEP'T CORR., 2017 STAT. REPORT, at D-2 (2019), https://www.michigan.gov/documents/corrections/MDOC_2017_Statistical_Report_644556_7.pdf.

166 LEVINE & KETTUNEN, *supra* note 108, at 3 & tbl.1.

167 *Id.* at 6 tbl.3. An earlier, but more expansive, CAPPS study released in 2009 details similarly low rates, documenting the reoffense rates of individuals who had committed homicide (defined as second-degree murder, manslaughter, or others like negligent homicide) released between 1986 and 1999. Fourteen of the 2558 (0.5%) released individuals imprisoned for homicide were reimprisoned for another homicide within four years (and 7% were imprisoned for any new offense). LEVINE, *supra* note 108, at 4, 21 tbl.3.

168 It is worth noting that the study provides less information regarding relevant comparison groups such as nonviolent offenders, released in a similar time period.

169 Roberts et al., *supra* note 102, at 504–05.

170 *Id.* at 499.

171 *Id.* at 504, 505 & tbl.5. The authors only report a sample size of 326 in Table 5.

172 Melanie-Angela Neuilly et al., *Predicting Recidivism in Homicide Offenders Using Classification Tree Analysis*, 15 HOMICIDE STUD. 154, 158 (2011).

173 *Id.* at 163.

studies indicate low recidivism rates for individuals released after incarceration for serious violent offenses in New Jersey.

f. New York

The New York Department of Corrections and Community Supervision regularly publishes statistics on the three-year new-crime reincarceration rate for prisoners released after 1985.[174] The most recent of these publications presents data for 665,118 prisoners released from 1985 to 2012.[175] Individuals released after serving sentences for violent felonies are later reimprisoned for new crimes at a modestly lower rate (14.1%) than the average released individual (14.5%) and also at a noticeably lower rate than individuals released after serving property-crime or other-crime sentences (16.8%).[176] Individuals previously incarcerated for violent crimes are reimprisoned for new crimes at a similar rate to drug offenders (13.9%).

Among individuals previously imprisoned for violent crimes, the rate of new-crime reincarceration for individuals who served prison time for murder is the lowest (1.9%).[177] The rates for people convicted of attempted murder (7.8%), manslaughter (6.6%), and rape (8.2%) are also fairly low compared to the average released person.[178] Moreover, there is little evidence in these data to support the widespread fear that those who commit homicide are likely to do so again. Only 0.3% of individuals released following a sentence for homicide (defined as murder, attempted murder, manslaughter, and other criminally negligent homicide) were reimprisoned for a new homicide (sixty-six of 21,225).[179] Only 0.2% of the individuals released after murder or attempted murder sentences (sixteen of 7964) were reimprisoned for a new murder or attempted murder, a rate similar to the murder rate for individuals released after serving sentences for other crimes.[180]

The New York analysis also helpfully presents recidivism calculations by age groups.[181] Older released individuals (over sixty-five) initially imprisoned for any offense were reimprisoned for any new crime at a rate of 3.9% (101 out of 2618 released).[182] In 2012, of the 168 individuals older than sixty-five who were released, only one reoffended through a violent

174 BRYANS, *supra* note 108.

175 *Id.* at 3 tbl.2.

176 *Id.* app. C at 39. Other crimes include third-degree burglary, grand larceny, forgery, driving while intoxicated, all other felonies, and business corruption. When the violent felony category of releasees is expanded to include those released after other coercive offenses, the new commitment recidivism rate is 13.8%.

177 *Id.*

178 *Id.*

179 *See id.* (21,225 releases); *id.* app. E.2 at 48–49 (66 reimprisonments).

180 *Id.* app. C at 39 (7964 releases); *id.* app. E.2 at 48 (16 reimprisonments).

181 *Id.* at 15 & fig.7, 16 tbl.7.1, 17 tbl.7.2.

182 *Id.* at 16 tbl.7.1.

offense.[183] One returned to prison for attempted assault, and five returned for drug and property offenses.[184]

g. Pennsylvania

To assess the recidivism risk of their releasees, the Pennsylvania Department of Corrections tracked 13,814 offenders released in 2008 over a three-year period.[185] The data indicate that the three-year rearrest rate is similar for individuals originally imprisoned for violent crimes (45.6%) and for property crimes (52.7%).[186] These aggregate numbers mask variation within these categories of crimes, as individuals released following incarceration for murder or manslaughter were rearrested at a lower 33% rate.[187] As in the BJS data, this analysis reveals some degree of same-crime reoffending (13% of violent releasees were rearrested for violent offenses compared to about a 7% violent rearrest rate for nonviolent releasees); individuals are more likely to be rearrested for violent crimes if they were previously imprisoned for a violent crime.[188] Unfortunately, the Department's report does not support fine-grained linking between releasees' imprisonment offenses and their rearrest crime types, so we cannot estimate repeat-homicide rates specifically.

2. International Studies

In the United States, homicide sentences (especially murder sentences) are typically very long, so those released—if they are released—are generally no longer young. Policymakers might worry that studies of existing releasees are therefore not especially informative as to the potential effect of reforms that would release younger offenders after serving shorter terms. But research from other countries in which long prison sentences are rare, even for homicide, offers some guidance. This research also tends to show quite low recidivism rates for individuals released after homicide sentences, although not quite as low as most U.S. studies.

In general, estimates of the rate of recidivism via another homicide from other countries are often in the range of 1%–3.5%.[189] For example, evidence from Finland, where sentences—even for homicide—are much

183 *Id.* at 17 tbl.7.2.

184 *Id.* We discuss data that are supportive of this apparent trend in more depth below. In our New York data, covering a similar time period and over one thousand releases, there are no observed new-crime murder or nonnegligent manslaughter reincarcerations for older individuals who were initially imprisoned for murder or nonnegligent manslaughter. *See infra* Part III.

185 BELL ET AL., *supra* note 108.

186 *Id.* at 21 tbl.13.

187 *Id.* at 21 tbl.12.

188 *Id.* at 23 tbl.15.

189 *See generally* Stål Bjørkly & Leif Waage, *Killing Again: A Review of Research on Recidivistic Single-Victim Homicide*, 4 INT'L J. FORENSIC MENTAL HEALTH 99 (2005) (providing a systematic literature review); Liem, *supra* note 124, at 21 (same).

shorter, indicates a rate of 2.3%–3.3%.[190] In the Netherlands, Pieter Baay and coauthors in a study of 621 people released after serving relatively short homicide sentences report that 25% of them reoffended by committing violent crimes in the nine years following their release, but the authors do not provide statistics about the type of new violent crime committed.[191] These researchers also suggest that the length of imprisonment does not generally lower recidivism rates in the Netherlands.[192] In Sweden, researchers followed 153 people released after completing homicide sentences (murder, manslaughter, or assault in combination with causing another's death) over 32 years. Approximately 3% reoffended with another crime that resulted in death and about 10% were reimprisoned for new major violent crimes.[193] In Sweden, sentences are again short; the mean time between homicide offenses was five years, and the longest sentences served tend to be less than twelve years.[194]

III. New Recidivism Analysis Using National Correction Reporting Program (NCRP) Data

In this Part, we present new estimates of recidivism for those convicted of violent crimes, calculated using data drawn from the National Corrections Reporting Program (NCRP).[195] In addition to building on a much larger sample than previous new-crime reincarceration studies, our analysis provides a more systematic breakdown of the relationship between violent-crime and homicide recidivism and factors such as time served and age at release. Unlike many criminal justice databases, the NCRP allows for linkages to be made across prison entries and exits over time for individual offenders, enabling us to follow individuals and study recidivism.[196] While the NCRP data

190 *See* Markku Eronen et al., *Factors Associated with Homicide Recidivism in a 13-Year Sample of Homicide Offenders in Finland*, 47 Psychiatric Servs. 403, 405 (1996) (finding 2.3%); Jari Tiihonen et al., *Risk of Homicidal Behaviour Among Persons Convicted of Homicide*, 72 Forensic Sci. Int'l 43, 44, 45 tbl.1 (1995) (finding 3.3%). In Finland, the median time prisoners serve for any offense is about four months; most murder offenses are associated with a prison stay of ten to fifteen years followed by a pardon; other homicides have shorter time served, generally less than ten years. *Finland: Sentencing and Punishment*, Country Data, http://www.country-data.com/cgi-bin/query/r-4747.html (last visited Mar. 11, 2020) (data as of December 1988).

191 Pieter E. Baay et al., *"Ex-Imprisoned Homicide Offenders: Once Bitten, Twice Shy?" The Effect of the Length of Imprisonment on Recidivism for Homicide Offenders*, 16 Homicide Stud. 259, 268–70 (2012). The average age of the individual at the time of the initial homicide offense in this study was about thirty-two years, and the average length of imprisonment for that offense was about 4.25 years. *Id.* at 269 tbl.2.

192 *Id.* at 274.

193 Joakim Sturup & Per Lindqvist, *Homicide Offenders 32 Years Later—A Swedish Population-Based Study on Recidivism*, 24 Crim. Behav. & Mental Health 5, 11, 13 (2014).

194 *Id.* at 7, 13.

195 *See* Carson & Kaeble, *supra* note 6.

196 *See, e.g.*, William Rhodes et al., *Following Incarceration, Most Released Offenders Never Return to Prison*, 62 Crime & Delinq. 1003 (2016); Ryan Sherrard, "Ban the Box" Policies

have limitations related to distinguishing imprisonments for new crimes from reincarceration for technical parole violations in certain states,[197] we are able to draw cautious inferences by using data from states known to have the most accurate data on this important distinction. Our analysis shows a low overall rate of reoffense for individuals released following violent-crime sentences (relative to other releasees). We find that violent-crime and homicide reoffense rates are low in absolute terms, but higher than the rates we observe for those previously incarcerated for other crimes. We also rigorously document lower violent-crime recidivism rates for older populations and individuals who have served much longer sentences.

The NCRP data we use in our analysis come from the Interuniversity Consortium for Political and Social Research (ICPSR).[198] Data-collection efforts underlying the NCRP began in 1983, but we use the publicly available data, which run from 1991 to 2016 and contain information for term records, prison admissions, prison releases, and year-end prison population counts.[199] We construct the recidivism rates we present by exploiting a unique identifier developed by Abt Associates Inc. (the organization that collects NCRP data on behalf of the Bureau of Justice Statistics), which allows us to observe whether an individual is reimprisoned for a new charge after being released from prison after serving a sentence for an earlier crime.[200] The data have important limitations: we are unable to label a new imprisonment as recidivism when an individual reoffends across state lines (which is also a problem in earlier studies),[201] we must rely on potentially inconsistent voluntary state reporting, and we depend on the accuracy of publicly available data in which individuals are matched across observations by a third party.[202]

---

and Criminal Recidivism (Jan. 6, 2020) (unpublished manuscript), https://ssrn.com/abstract=3515048; *see also infra* note 202.

197 *See infra* notes 204–05 and accompanying text.

198 The data and documentation we use in our analysis are available from *National Corrections Reporting Program, 1991–2016: Selected Variables (ICPSR 37021)*, NAT'L ARCHIVE CRIM. JUST. DATA (Aug. 30, 2018), https://www.icpsr.umich.edu/icpsrweb/NACJD/studies/37021/datadocumentation. Replication code for any of our analyses is available upon request.

199 *See id.*

200 We do not directly address parole or reincarceration for technical violations. We treat individuals in our data as if they are released for the time period. Importantly, if we remove the individuals currently imprisoned for technical violations from the released population, the results described throughout remain qualitatively unchanged.

201 Individuals released from prison are unlikely to move across state lines at rates that are problematic for our analysis. In addition to the fact that these individuals may have to comply with release conditions, estimates from the Census Bureau show that, from 2017 to 2018, only 1.5% of all adults across the United States moved to a different state; among those with incomes below 150% of the poverty line, only 1.9% did so. *See Geographical Mobility: 2017 to 2018*, U.S. CENSUS BUREAU, at tbl.1-1 (Nov. 2018), https://www.census.gov/data/tables/2018/demo/geographic-mobility/cps-2018.html (follow "United States" hyperlink).

202 Some previous studies using older versions of the NCRP restrict the sample of states they consider for analysis. *See, e.g.*, John F. Pfaff, *The Myths and Realities of Correctional Sever-*

We count an event as "recidivism" if the NCRP reports that the individual has been admitted to prison as a "new court commitment" and the individual is recorded as having previously been observed in prison in our sample. For consistency with previous recidivism findings, we restrict qualifying new-crime reincarceration to admission-to-prison events that occur within three years of the individual's last release from prison, and we further restrict our sample to include only individuals released prior to 2014 in order to allow a full three-year window for each observation.[203] We calculate the number of released individuals (the denominator of the recidivism ratio) as the number of events in which a prisoner is released after being in prison for a new court commitment for the specific offense of interest.

One central issue with our construction of recidivism rates is that we really need the NCRP data to report the type of prison entry accurately and consistently, since we rely on a "new court commitment" to indicate a new criminal offense rather than a noncriminal parole violation.[204] If technical

ity: Evidence from the National Corrections Reporting Program on Sentencing Practices, 13 AM. L. & ECON. REV. 491, 520, 521 tbl.A1 (2011) (restricting the study's sample to a smaller subset of eleven states that more closely match other data sources); Derek Neal & Armin Rick, *The Prison Boom and the Lack of Black Progress After Smith and Welch* 23 (Nat'l Bureau of Econ. Research, Working Paper No. 20283, 2014) (restricting the sample to a smaller subset of eight states). Our study uses the full sample of more recently matched NCRP data available through the ICPSR, but the results are qualitatively similar if we restrict our analysis to the same subsets of these other studies. Other studies using the more recent NCRP data include Crystal S. Yang, *Local Labor Markets and Criminal Recidivism*, 147 J. PUB. ECON. 16 (2017); and Amanda Y. Agan & Michael D. Makowsky, *The Minimum Wage, EITC, and Criminal Recidivism* (Nat'l Bureau of Econ. Research, Working Paper No. 25116, 2018). For a description of how prison terms were created, see Jeremy Luallen et al., Abt Assocs. Inc., *White Paper #3: A Description of Computing Code Used to Identify Correctional Terms and Histories*, NAT'L CORRECTIONS REPORTING PROGRAM (NCRP) WHITE PAPER SERIES (Sept. 15, 2014), http://www.icpsr.umich.edu/files/NACJD/ncrp/white-paper-computing-code.pdf.

203 Because we define recidivism to be reentry for events deemed "new commitments," there is some question of how to treat the time until recidivism when an intervening parole/technical violation occurs. We treat the time until recidivism as being "reset" by such a return, effectively setting time until recidivism as running from the last release associated with a given initial commitment.

204 *See* William Rhodes et al., Abt Assocs. Inc., *White Paper #2: NCRP Reporting*, NAT'L CORRECTIONS REPORTING PROGRAM (NCRP) WHITE PAPER SERIES 3 n.7 (Nov. 22, 2011), http://ncrp.info/LinkedDocuments/NCRP%20White%20Paper%20No%202.NCRP%20Reporting.Nov%202011.pdf ("There are two problems. It seems likely that prison authorities (or, at least, those who enter data into data systems) are unaware of admission type. Or, if admission type is recorded accurately, the type may have little meaning. As an illustration, some offenders may be revoked for a technical violation of the conditions of supervision, while other offenders may be resentenced following a technical violation of the conditions of supervision. Both administrative actions have the same consequences, but the former implies relatively high revocation rates compared with the latter."); *see also* Gerald Gaes et al., Abt Assocs. Inc., Classifying Prisoners and Returns: Problems and Potential Solutions 21 & n.6 (Oct. 8, 2015) (unpublished draft), http://ncrp.info/LinkedDocuments/Classifying%20Prisoner%20Returns.10%208%202015.pdf ("First we examine the distribution of admissions codes across all of the states over a 12 year period, from 2000 to[ ]2011. The following states have 97 percent or more of new court commitments: Flor-

violations are miscoded as new offenses, the recidivism rates we produce will be erroneously inflated. Unfortunately, NCRP's coding instructions make such miscoding more probable, and this is especially likely to manifest as higher same-crime recidivism rates, as parole violations are generally coded under the same offense classification as the initial imprisonment.[205] To the extent that parole returns and revocations reflect new crimes, but are in fact recorded as revocation returns, we will undercount recidivism.[206]

In order to mitigate these issues, we restrict our main analysis sample to include only the states we feel more confident are coding admission type correctly. Following work conducted by authors at Abt, the organization managing the NCRP on behalf of the BJS, we select

> two states that are known to have reliable data, California and New York. The reliability is based on a series of tests [Abt conducts] on the data . . . and on communication with the data providers who have run independent checks against the data when asked to resolve possible ambiguities.[207]

---

ida, Idaho, Maryland, North Carolina, and Washington. [n.6: 'Over the period of interest, only a small proportion of North Carolina offenders served terms of post-confinement community supervision. We would expect most admissions to be for new commitments. However, independent investigation suggests that the rate of new commitments is still implausibly high.'] It seems unreasonable that these states admit almost exclusively new court commitments.").

205 For details on some of the complexity associated with data entry, why it might be fairly prone to error, and why this might vary by state, see Gaes et al., *supra* note 204, at 13–20 ("NCRP also instructs the users to distinguish types of revocations, those based on a technical violation and those based on a new sentence. However, NCRP does not require the contributor to code differences in revocations that might be distinguishable as purely technical violations (absconding, missing curfews, failure to report for a drug test) as opposed to unprosecuted new crimes. . . . The offender completes his or her sentence following conviction for a robbery, and while on post-conviction community supervision (PCCS), the offender commits a burglary. Community supervision is revoked and the person is returned to prison or jail pending completion of the revocation process. He/she is subsequently convicted for the burglary, is sentenced for that new crime, and begins that new term while already in custody following the revocation. According to the NCRP coding rules, persons readmitted to prison should have both the original crime(s) in addition to any new crime(s) recorded on the admission record. So in our example there should be both a burglary and a robbery offense. NCRP instructions also use the offense with the longest associated sentence to categorize the prison term. In our example, the original robbery will probably have the longer sentence. However, the person is really serving an aggregate prison sentence. This not only confounds the classification of the offense, robbery versus burglary, but leads to ambiguity in time-served estimation. From the perspective of the NCRP, the offender enters prison following a robbery revocation, but he/she is serving a combined robbery/burglary sentence and the length of time-served on this new term is partly or mostly attributable to the new crime, burglary.").

206 *See id.* at 13–16, 18–19 (explaining that there is some evidence that this happens due to either coding errors or policy choices—as rather than receiving new arrest charges, individuals may be imprisoned for a parole revocation to save administrative resources).

207 *Id.* at 28. One issue with including California is that the Public Safety Realignment Act was enacted in 2011; it resulted in many individuals convicted of crimes serving time in jail rather than state prisons. *See* Agan & Makowsky, *supra* note 202, at 9. This would remove this population from the NCRP data entirely. In the NCRP data, we do observe an

Restricting the sample in this way leaves us with 30% of the original sample, or about 1.75 million observations. The size of this population remains very large relative to existing studies. However, in case California and New York are not sufficiently representative of other states in some way, we also present results using data from all states. We include these alternative findings in the main tables whenever space allows. Even where these results are not included, we note that they are generally consistent with our more restricted sample results.[208]

We first confirm that trends common in other datasets are also found in the NCRP data. We replicate earlier findings that violent offenders recidivate at lower rates than other categories of offenders, but when they do recidivate, it is more likely to be a violent reoffense.[209] Table 5 describes new-crime reincarceration rates by offense categories. The reincarceration rate for individuals released after an initial incarceration for murder or nonnegligent manslaughter is the lowest of any category, at 4.4% (well below the average rate unconditional on initial offense type, which is 9.9%).[210] However, this group's new-crime reincarceration rate for another murder or nonnegligent manslaughter offense is 1.3%, which is high relative to the rate for all releasees, 0.2%.[211] For reference, if we include data from all states present in the NCRP (including those states that are likely overclassifying parole revocations as new commitments), recidivism rates are much higher than they are in California and New York alone, especially for same-crime recidivism.[212] This, however, is very likely an artifact of the miscoding problem discussed

increase in recidivism rates at the time the PSRA is enacted. It is, however, unlikely to cause measurement issues for individuals who serve longer sentences. For additional discussion of this issue, see *id.*

208 These alternative results—as well as results from many other specifications designed to explore the robustness of our work—are available from the authors upon request.

209 To explore NCRP recidivism flows interactively, see Ben Pyle, *Criminal Recidivism: NCRP Data*, http://benpyle.com/recidivism_web/; http://benpyle.com/recidivism_web/sankey_diagrams (last visited Feb. 18, 2020).

210 Our data demonstrate lower overall new-crime reincarceration rates than the average reported in BJS 2005, suggesting that these two states may report lower recidivism than other states.

211 There is interesting heterogeneity across states for these rates. This could be a function of either variation in reporting methodology or in true underlying rates. To the degree the variation stems from true differences in underlying rates, the data may be able to provide insight into programs that are effective in easing the reentry process. The rates for any recidivism/murder or nonnegligent manslaughter recidivism after an initial incarceration for murder or nonnegligent manslaughter for the states in the sample are as follows: California (6.0%/1.7%) and New York (1.1%/0.1%). Results for all NCRP reporting states are available upon request.

212 In this—likely flawed—sample, 17.5% of prisoners released after serving sentences for violent crimes recidivate via any crime, 9.5% via another violent crime, and 0.4% via homicide. Among prisoners released after homicide sentences, 7.5% recidivate via any crime, 4.9% via violent crime, and 3.7% via another homicide. The patterns observed in the subsequent tables and discussion also hold in the broader sample of NCRP states, albeit with a higher baseline level of recidivism.

TABLE 5: NEW-CRIME REINCARCERATION OF PRISONERS, BY MOST SERIOUS INITIAL OFFENSE AND TYPES OF POSTRELEASE CONVICTIONS[213]

Percent of Released Prisoners Re-Imprisoned Within Sample for

Most Serious Commitment Offense	Any Offense	Murder/ Non-neg. Mans.	Neg. Mans.	Rape/ Sex Assault	Robbery	Assault	Burglary	Larceny	Auto Theft	Fraud	Drugs	Public Order
Total	9.9	0.2	0.0	0.2	0.9	1.1	1.2	0.6	0.4	0.2	2.7	1.7
Murder/Non-neg. Mans.	4.4	1.3	0.0	0.1	0.3	0.5	0.2	0.1	0.1	0.1	1.0	0.6
Negligent Mans.	4.4	0.2	0.5	0.1	0.3	0.6	0.2	0.3	0.1	0.0	0.9	0.9
Rape/Sex Assault	4.9	0.1	0.0	1.0	0.3	0.5	0.3	0.2	0.1	0.1	0.8	1.4
Robbery	11.0	0.2	0.0	0.2	2.6	1.1	1.1	0.7	0.4	0.2	2.7	1.4
Assault	9.9	0.2	0.0	0.2	0.8	2.7	0.7	0.3	0.4	0.1	1.8	1.9
Burglary	12.3	0.1	0.0	0.2	1.0	0.9	3.8	1.1	0.6	0.3	2.1	1.3
Larceny	10.9	0.1	0.0	0.1	0.9	0.9	1.7	2.7	0.4	0.3	1.9	1.0
Auto Theft	15.3	0.2	0.0	0.2	1.9	1.5	1.9	0.9	2.5	0.3	2.4	2.3
Fraud	8.1	0.1	0.0	0.1	0.5	0.6	1.2	0.9	0.3	1.3	1.5	0.9
Drugs	8.2	0.1	0.0	0.1	0.5	0.7	0.6	0.4	0.3	0.1	4.0	1.0
Public Order	12.4	0.2	0.0	0.2	0.9	1.5	0.8	0.3	0.5	0.2	2.2	4.9

213 Authors' calculations based on NCRP data. In this table, the numerator for each cell entry is the number of persons imprisoned for a charge within three years of their last

above and in the notes, because parole revocations will often receive the label of the prior offense, even if the new offense was a different crime or a mere technical violation.

Next, we exploit the NCRP data to document the fact that individuals become less prone to recidivism as they age. As a starting point, we calculate that 15% of individuals aged eighteen to twenty-four years at the time of release will have a new-crime reincarceration within three years. This rate declines steadily (monotonically) with age in our data; about 8% of people aged thirty-five to forty-four reoffend within three years. After age forty-four, the data indicate that new-crime reincarceration risk declines more dramatically, with about 6% of those aged forty-five to fifty-four and only 3% for the fifty-five-plus age group reimprisoned within three years. The NCRP data are rich enough to examine the age-crime recidivism relationship in even greater detail, by studying how this age-recidivism relationship varies by an individual's previous crime. Table 6 shows that the age-recidivism relationship for violent crime declines at a rate similar to property crime. This table also highlights, however, that the lower recidivism rates of individuals serving time for previous violent offenses (compared to others) are not solely a function of their being older. Within any given age bracket, individuals released after imprisonment for violent crimes recidivate at a lower rate than releasees who served time for any other category of crime.

TABLE 6: PERCENTAGE OF RELEASED POPULATION WITH NEW-CRIME REINCARCERATION WITHIN THREE YEARS FOR ANY OFFENSE BY AGE[214]

Crime Category for Prior Imprisonment	Age at Release From Prior Imprisonment					
	18–24	25–34	35–44	45–54	55+	Any Age
Violent	14%	9%	7%	4%	1%	9%
Property	17%	13%	10%	8%	5%	12%
Drugs	12%	8%	6%	5%	3%	8%
Public	17%	10%	8%	6%	4%	10%
Other	12%	8%	5%	2%	3%	8%
Any Crime	15%	10%	8%	6%	3%	9%

The patterns appear similar if one looks at individuals incarcerated for murder or nonnegligent manslaughter specifically. For example, in Table 7, we see that although 12% of people released after murder or nonnegligent manslaughter sentences before they turn twenty-four are reimprisoned for any new offense, only 0.4% of individuals who were initially imprisoned for

release, and the denominator is the number released for each type of imprisonment offense. Rows do not sum due to omission of crimes categorized as "other."

214 Authors' calculations based on NCRP data. Recidivism is defined as a new court imprisonment. Offenders imprisoned for technical/parole violations are not considered recidivists.

murder or nonnegligent manslaughter released after the age of fifty-five are reimprisoned for any new offense. Table 7 does not detail the specific type of reimprisonment offense by age brackets but rather treats all new-crime reincarcerations equally. Because of the particular policy concerns surrounding murder or nonnegligent manslaughter recidivism,[215] we construct a chart similar to Table 7, but we restrict the reoffense category to murder or nonnegligent manslaughter exclusively. The result—Table 8—reveals a new pattern in the NCRP data. In every age bracket, individuals previously convicted of murder or nonnegligent manslaughter are more likely to commit murder or nonnegligent manslaughter than individuals previously convicted of any other crime (whereas Table 7 shows that those with previous murder or nonnegligent manslaughter convictions have lower overall recidivism rates). Still, the absolute murder or nonnegligent manslaughter reoffense rate is low, and 99% of those who previously served time for murder or nonnegligent manslaughter do not commit another murder or nonnegligent manslaughter upon release. Notably, the murder or nonnegligent manslaughter reoffense rate is lower yet among older releasees—even among those previously convicted of murder or nonnegligent manslaughter, only 0.2% are reimprisoned within three years of their release for another murder or nonnegligent manslaughter if their release occurs after age fifty-five.

Although the results we present here, as well as the findings of prior studies we discuss above, suggest some differences in recidivism risk by offense type, it is not obvious that previous offense type adds predictive power when evaluating the future trajectory of otherwise comparable individuals.[216] For example, perhaps different outcomes among different offense-type groups are explained by different age profiles or by other underlying individual differences. For this reason, we use regression analysis to disentangle the predictive value of different correlated variables. Employing regression analysis allows us to estimate the association between each explanatory variable and the outcome variable when all the other explanatory variables are held constant.[217] We do not use this exercise or our results to support causal claims (many important but unobserved variables are likely omitted in this analysis, which could confound any such claims) but rather to make more refined predictive claims.

215 *See supra* Section I.C.

216 *See generally* ANGRIST & PISCHKE, *supra* note 149.

217 Authors' calculations based on NCRP data. Recidivism is defined as a new court imprisonment. Individuals who are reimprisoned for technical/parole violations are not considered recidivists in this analysis. The number in brackets indicates the number of observations in the sample. The numbers do not sum as individuals with missing age at release are included in the total but not reported in a separate column.

TABLE 7: PERCENTAGE OF RELEASED POPULATION BY AGE WHO HAVE A NEW-CRIME REINCARCERATION WITHIN THREE YEARS[218]

Crime Category for Initial Imprisonment	Age at Release From Initial Imprisonment					
	18–24	25–34	35–44	45–54	55+	Any Age
Murder/Non-neg. Mans.	12.3% [1,864]	6.8% [8,234]	3.5% [6,147]	1.5% [4,253]	0.4% [3,484]	4.5% [23,982]
Negligent Mans.	7.3% [1,271]	4.3% [3,047]	4.0% [1,831]	2.6% [995]	2.1% [432]	4.4% [7,576]
Rape/Sex Assault	10.6% [6,191]	6.7% [15,967]	4.2% [15,870]	2.3% [9,363]	0.8% [6,280]	5.0% [53,671]
Robbery	14.2% [39,698]	11.1% [39,764]	9.6% [18,494]	6.0% [6,055]	3.5% [1,215]	11.6% [105,226]
Assault	13.7% [25,764]	9.7% [41,595]	7.0% [26,342]	4.6% [11,774]	2.2% [3,301]	9.2% [108,776]
Other Violent	14.5% [4,687]	9.0% [10,559]	7.0% [7,564]	5.0% [3,269]	2.7% [914]	8.7% [26,993]
Burglary	16.3% [32,133]	12.7% [43,091]	11.0% [30,815]	8.8% [12,539]	6.7% [2,387]	12.7% [120,965]
Larceny	17.0% [9,006]	11.5% [22,027]	9.1% [24,681]	7.3% [13,389]	4.9% [3,564]	10.3% [72,667]
Auto Theft	19.8% [16,687]	14.6% [18,445]	11.2% [9,161]	8.9% [2,710]	4.4% [405]	15.4% [47,408]
Fraud	13.0% [3,295]	9.2% [12,009]	7.0% [10,786]	4.4% [4,777]	2.4% [1,208]	7.9% [32,075]
Other Property	17.2% [8,295]	14.0% [12,224]	10.8% [8,628]	8.6% [3,320]	4.7% [729]	13.2% [33,196]
Drugs	12.3% [64,442]	8.0% [149,995]	6.3% [118,809]	5.2% [53,660]	3.4% [12,953]	7.7% [399,859]
Public Order	17.0% [25,187]	10.5% [48,745]	7.9% [36,135]	6.3% [18,321]	4.2% [6,035]	10.2% [134,423]
Other	12.3% [2,391]	7.9% [3,342]	4.5% [1,799]	2.4% [587]	2.5% [160]	7.9% [8,279]
Any Crime	14.6% [240,911]	9.8% [429,044]	7.6% [317,062]	5.6% [145,012]	3.1% [43,067]	9.4% [1,175,096]

We report our findings in Table 9. We regress our measure of recidivism (defined as reincarceration for a new offense within three years) on the prior imprisonment characteristics we previously analyzed one at a time as well as a number of additional factors that are easy to measure, available to us, and perhaps useful to policymakers.[219] The covariates we include in each regres-

218 We employ a linear probability model in which the outcome variable—recidivism—is a dichotomous variable equal to one if the individual reoffends within three years and to zero otherwise. Similar approaches are used in other empirical legal work. *See, e.g.*, Thomas A. Loughran et al., *On Ambiguity in Perceptions of Risk: Implications for Criminal Decision Making and Deterrence*, 49 CRIMINOLOGY 1029, 1049 n.18 (2011) (explaining the advantages of linear probability models over logit or probit models in a similar context).

219 *See* Elaine Angelino et al., *Learning Certifiably Optimal Rule Lists for Categorical Data*, 18 J. MACHINE LEARNING RES. 1 (2018), http://www.jmlr.org/papers/volume18/17-716/17-716.pdf (testing machine learning algorithms capable of producing rule lists with comparable predictive accuracy to a conventional recidivism risk prediction tool); *see also* David

TABLE 8: PERCENTAGE OF RELEASED POPULATION BY AGE WHO RECIDIVATE FOR MURDER OR NONNEGLIGENT MANSLAUGHTER WITHIN THREE YEARS[220]

	Age at Release From Initial Imprisonment					
Crime Category for Initial Imprisonment	18–24	25–34	35–44	45–54	55+	Any Age
Murder/Non-neg. Mans.	2.7% [1,864]	1.8% [8,234]	0.9% [6,147]	0.6% [4,253]	0.2% [3,484]	1.2% [23,982]
Negligent Mans.	0.2% [1,271]	0.1% [3,047]	0.1% [1,831]	0.2% [995]	0.0% [432]	0.1% [7,576]
Rape/Sex Assault	0.2% [6,191]	0.1% [15,967]	0.1% [15,870]	0.0% [9,363]	0.0% [6,280]	0.1% [53,671]
Robbery	0.4% [39,698]	0.2% [39,764]	0.1% [18,494]	0.0% [6,055]	0.2% [1,215]	0.2% [105,226]
Assault	0.5% [25,764]	0.2% [41,595]	0.1% [26,342]	0.1% [11,774]	0.0% [3,301]	0.2% [108,776]
Other Violent	0.3% [4,687]	0.2% [10,559]	0.0% [7,564]	0.0% [3,269]	0.0% [914]	0.1% [26,993]
Burglary	0.3% [32,133]	0.1% [43,091]	0.1% [30,815]	0.0% [12,539]	0.0% [2,387]	0.1% [120,965]
Larceny	0.3% [9,006]	0.1% [22,027]	0.0% [24,681]	0.0% [13,389]	0.0% [3,564]	0.1% [72,667]
Auto Theft	0.6% [16,687]	0.2% [18,445]	0.1% [9,161]	0.0% [2,710]	0.0% [405]	0.3% [47,408]
Fraud	0.1% [3,295]	0.1% [12,009]	0.0% [10,786]	0.0% [4,777]	0.0% [1,208]	0.0% [32,075]
Other Property	0.4% [8,295]	0.1% [12,224]	0.1% [8,628]	0.2% [3,320]	0.0% [729]	0.2% [33,196]
Drugs	0.4% [64,442]	0.1% [149,995]	0.0% [118,809]	0.0% [53,660]	0.0% [12,953]	0.1% [399,859]
Public Order	0.6% [25,187]	0.2% [48,745]	0.1% [36,135]	0.1% [18,321]	0.0% [6,035]	0.2% [134,423]
Other	0.4% [2,391]	0.2% [3,342]	0.0% [1,799]	0.0% [587]	0.0% [160]	0.2% [8,279]
Any Crime	0.4% [240,911]	0.2% [429,044]	0.1% [317,062]	0.1% [145,012]	0.0% [43,067]	0.2% [1,175,096]

sion are the age bracket of the individual at the time of release (as a categorical variable), the amount of prison time an individual served on the prior offense, the square of this term, the number of previous offenses, its square, and the initial offense type.[221] In the regression results reported in the

Thornton et al., *Estimating Lifetime and Residual Risk for Individuals Who Remain Sexual Offense Free in the Community: Practical Applications*, SEXUAL ABUSE 2 (Sept. 3, 2019), https://journals.sagepub.com/doi/pdf/10.1177/1079063219871573 ("A common interpretation of risk scores based on static (e.g., criminal history) variables is that they assign risk levels that are themselves static, that is, once an individual has been assigned a risk level, that label applies in perpetuity. This is not the case.").

220 For table notes, see *supra* note 213.

221 To construct a yearly measure of time served, we subtract year of admission from year of release. This will measure time served, with rounding error, since we are not measuring the exact date within the year in which these events occur. Assuming this rounding error is randomly distributed, this measurement error will bias the estimate of the relation-

second and fourth columns of Table 9, we also include controls for state-of-release by year fixed effects, allowing us to compare recidivism rates within a given release cohort in each state.[222]

The first column of the table confirms our earlier finding that individuals who are released at an older age are less likely to recidivate by committing any sort of offense that leads to imprisonment. For instance, twenty-five-to-thirty-four-year-olds appear to reoffend about five percentage points less frequently than individuals released between the ages of eighteen and twenty-four, holding other observable factors constant. This reduction in the recidivism rate grows to twelve percentage points for individuals released after the age of fifty-five (the base rate here is 13% for individuals with one prior murder or nonnegligent manslaughter incarceration and ten years served, so this is a very large effect, wiping out most recidivism).

We also analyze recidivism rates in relation to the amount of time the individual served on their prior sentences. This analysis shows that longer incarceration is associated with increased recidivism up to the fifteenth year of incarceration, after which each additional year of incarceration is associated with lower recidivism rates. To illustrate, two years of incarceration is associated with a 0.6-percentage-point higher recidivism rate and ten years of incarceration is associated with a 2.3-percentage-point higher recidivism rate. However, this criminogenic association diminishes as sentence length grows (controlling for age group).[223] One important advantage of our regression

---

ship with recidivism toward zero, so the actual effect of sentence served may be larger in magnitude than regression results imply. We can perform a similar exercise, estimating each coefficient in an interacted manner. In this specification, the effects of age and time served are allowed to vary depending on the initial commitment offense. This is essentially partitioning the recidivism rates to a finer degree, allowing for narrowly defined group recidivism rates to be calculated. This nonparametric flexibility is important if recidivism rates vary in complex or unpredictable ways across observable characteristics. For instance, if the causes of violent offenses are of a different sort than the impetus for property crimes, one might expect the impact of age on recidivism propensity to vary in a way that is not accommodated in a simpler specification. The results from this exercise are consistent with the more saturated specification and are available upon request.

222 Concretely, moving from one year to two years of incarceration is associated with a 0.3-percentage-point higher recidivism rate, while the movement from the ninth to tenth year is associated with a smaller 0.1-percentage-point increase in the recidivism rate. After fifteen years in prison, each additional year of incarceration is associated with less recidivism than the previous year.

223 In these regressions, we omit age category 18–24 and the initial offense of homicide. The regressions also include, but we do not report coefficients for legibility reasons, an "other" category for offenses (other property, other violent, and a broad other category) and additionally a category of other release type. Results for these coefficients are available upon request. Heteroskedasticity- and autocorrelation-consistent standard errors are in parentheses. Statistical significance is indicated by $*p < .05$, $**p < .01$, and $***p < .001$. For additional table notes, see *supra* note 213.

TABLE 9: REGRESSING RECIDIVISM ON IMPRISONMENT CHARACTERISTICS[224]

	(1)	(2)	(3)	(4)	(5)
	Any	Any	Murder/Non-neg. Mans.	Murder/Non-neg. Mans.	Murder/Non-neg. Mans.
Age at Release (18–24 Omitted)					
25–34 Years	−0.0514***	−0.0506***	−0.00250***	−0.00257***	−0.00522
	(0.001)	(0.001)	(0.000)	(0.000)	(0.004)
35–44 Years	−0.0767***	−0.0781***	−0.00343***	−0.00352***	−0.0106**
	(0.001)	(0.001)	(0.000)	(0.000)	(0.004)
45–54 Years	−0.0963***	−0.0978***	−0.00373***	−0.00377***	−0.0138***
	(0.001)	(0.001)	(0.000)	(0.000)	(0.004)
55+ Years	−0.115***	−0.115***	−0.00416***	−0.00419***	−0.0157***
	(0.001)	(0.001)	(0.000)	(0.000)	(0.004)
Years Served	0.00339***	0.00327***	0.000188***	0.000233***	−0.00124***
	(0.00019)	(0.00019)	(0.00003)	(0.00003)	(0.00026)
Years Served Squared	−0.000112***	−0.0000991***	−0.0000148***	−0.0000156***	0.0000290***
	(0.000007)	(0.000007)	(0.000002)	(0.000001)	(0.000007)
# Previous Offenses	0.105***	0.0953***	0.00225***	0.00252***	0.031
	(0.006)	(0.006)	(0.001)	(0.001)	(0.017)
# Prev. Offenses Squared	−0.0136***	−0.0106***	−0.000529***	−0.000541**	−0.00796*
	(0.002)	(0.002)	(0.000)	(0.000)	(0.004)
Initial Offense Type (Murder/Non-neg. Mans. Omitted)					
Negligent Mans.	−0.00656*	−0.00787**	−0.0116***	−0.0114***	
	(0.003)	(0.003)	(0.001)	(0.001)	
Rape/Sex Assault	0.00498*	0.00283	−0.0120***	−0.0119***	
	(0.002)	(0.002)	(0.001)	(0.000)	
Robbery	0.0408***	0.0409***	−0.0115***	−0.0113***	
	(0.002)	(0.002)	(0.001)	(0.000)	
Assault	0.0322***	0.0268***	−0.0107***	−0.0106***	
	(0.002)	(0.002)	(0.001)	(0.000)	
Burglary	0.0629***	0.0614***	−0.0119***	−0.0118***	
	(0.002)	(0.002)	(0.001)	(0.000)	
Larceny	0.0548***	0.0509***	−0.0117***	−0.0117***	
	(0.002)	(0.002)	(0.001)	(0.000)	
Auto Theft	0.0836***	0.0761***	−0.0107***	−0.0107***	
	(0.002)	(0.002)	(0.001)	(0.000)	
Fraud	0.0320***	0.0267***	−0.0120***	−0.0119***	
	(0.002)	(0.002)	(0.001)	(0.000)	
Drugs	0.0245***	0.0214***	−0.0116***	−0.0115***	
	(0.002)	(0.002)	(0.001)	(0.000)	
Public Order	0.0468***	0.0442***	−0.0108***	−0.0107***	
	(0.002)	(0.002)	(0.001)	(0.000)	
Unconditional Release	0.0362***	0.0499***	0.00337***	0.00408***	0.133***
	(0.002)	(0.002)	(0.000)	(0.000)	(0.015)
Constant	0.00508		0.0133***		0.00234
	(0.005)		(0.001)		(0.014)
Obs.	1,101,144	1,101,144	1,101,144	1,101,144	21,995
State × Year Fixed Effects	No	Yes	No	Yes	No

224 There is evidence that state-sponsored support for recently released offenders influences recidivism outcomes; this effect would likely be captured by state fixed effects, since policy and funding for such programs likely varies by state. *See* Kristy Holtfreter et al., *Poverty, State Capital, and Recidivism Among Women Offenders*, 3 CRIMINOLOGY & PUB. POL'Y 185, 200–04 (2004).

framework, which is not present in the previous literature or the earlier tables in this section, is that we are able to see the relationship between time served and recidivism while keeping separate the offsetting relationship between age of release and recidivism. Simple cross-tabulation tables would conflate these two relationships. However, when interpreting these results, it is important to keep in mind that our analysis is fundamentally an observational exercise and that we are not able to draw causal conclusions. For instance, we are unable to speak to whether there is a causal criminogenic effect of imprisonment because there may be some unobserved factor associated with releasees who have served longer sentences.[225] The number of prior offenses on the releasee's record shows a similar relationship to recidivism as longer time served does. An additional prior offense in an individual's criminal history is associated with more recidivism but at a decreasing rate as more priors accumulate.

Comparing recidivism rates across offense types tells a similar story as the summary statistics we display in earlier tables. Conditional on other factors we observe, individuals who were imprisoned for murder or nonnegligent manslaughter reoffend at a lower rate than individuals who were imprisoned for other offenses do. The share of individuals convicted for murder or nonnegligent manslaughter who were later reimprisoned is more than six percentage points lower than the share of individuals imprisoned for burglary and about five percentage points lower than the share of individuals incarcerated for larceny, after controlling for the other characteristics.[226]

In the third and fourth columns of Table 9, we restrict our attention to murder or nonnegligent manslaughter recidivism after release. A similar age trend is apparent in the murder or nonnegligent manslaughter recidivism rates—an individual released at age fifty-five or older reoffends via murder or nonnegligent manslaughter at a 0.4-percentage-point lower rate than an individual released before age twenty-five after netting out other observables. Holding age and other factors constant, the relationship of murder or nonnegligent manslaughter recidivism to our measure of time served is not monotonic—the risk increases with time served up to the sixth year (by a smaller amount each year) and decreases thereafter.

Another difference that emerges after restricting our attention to murder or nonnegligent manslaughter recidivism is that the initial crime of imprisonment category of murder or nonnegligent manslaughter is now associated with a higher rate of recidivism than the other prior offense categories. In other words, *ceteris paribus*, individuals previously imprisoned for murder or nonnegligent manslaughter reoffend by committing another mur-

225 For example, people who serve longer prison sentences may have been required to do so because of some characteristic or circumstance, unobservable in our data but observable to judges or parole boards, that makes them appear higher risk.

226 Our estimated coefficients are qualitatively similar in the second column of Table 9, indicating that while differences in reporting and behaviors between specific states and years may relate to part of the recidivism rates of these groups, the same patterns remain once we control for them.

der or nonnegligent manslaughter at about a 1-percentage-point greater rate than people whose prior offense falls into other categories.

In the fifth column of Table 9, we repeat the exercise reported in the third column but restrict our analysis to only include individuals who had previously been incarcerated for murder or nonnegligent manslaughter. In other words, we examine the observational relationship between age of release, years served, and other covariates but just for this particular population.[227] Given the relative rarity with which an individual is released following a sentence for murder or nonnegligent manslaughter, this approach allows us to generate a more tailored accounting of the recidivism patterns of the population we are chiefly interested in understanding—individuals convicted of murder or nonnegligent manslaughter. Our results show that the crime-age profile is again present and in fact more steeply negative than in previous specifications. Interestingly, years served is now also negatively associated with recidivism, albeit in a nonmonotonic manner.[228] The number of previous offenses again is positively associated with murder or nonnegligent manslaughter recidivism. We also note that unconditional release is associated with much higher reoffense rates relative to conditional release.

Our analysis demonstrates that older people who have served substantial sentences recidivate infrequently. We can also illustrate this point with some simpler summary statistics. We show the rate of murder or nonnegligent manslaughter new-crime reincarceration, disaggregated by time served and age of release, in Table 10. In our NCRP data, nine of about 3000 (0.3%) individuals released after murder or nonnegligent manslaughter offenses over the age of fifty-five who have served at least five years are reincarcerated within three years of release and only 3 of the releases (0.1%) ended in another murder or nonnegligent manslaughter new-crime reincarceration. One can contextualize this number by recalling the rates we presented in Table 7. Using our murder-or-nonnegligent-manslaughter definition of homicide, we find that the homicide-to-homicide recidivism rate for those older than fifty-five and who have served at least five years in prison is lower than the homicide reoffense rate for the *average* released individual under thirty-four and is comparable to the rate for an individual released between the ages of thirty-five to fifty-four. In sum, older violent offenders who have served sentences of at least five years are reimprisoned for murder or non-

227 Conducting our analysis in this way necessitates dropping the initial offense term because the only initial offense term in the analysis is homicide. This is equivalent to running the regression that interacts initial offense type with every other covariate and displaying the results from the homicide initial offense interacted term. Results from this fully interacted model are available from the authors upon request.

228 Recall that we include more than just one offense type in our "murder or nonnegligent manslaughter" category, so time served may be serving as a proxy for the severity of the prior homicide offense. If this is the case, we might interpret our results to mean that murder has a relatively low homicide recidivism rate relative to the other homicide offenses—that is, individuals who serve longer prison terms recidivate less frequently.

negligent manslaughter less frequently than individuals who are initially imprisoned for nonviolent offenses and released before age thirty-four.

We can perform a similar exercise by partitioning the sample by age of admission and age at release (for example, ages eighteen to twenty-four upon initial imprisonment and fifty-five and older on release). This can be informative as it allows for a better sense of how long a person has been incarcerated before release and may also speak to recent and proposed changes to the legal and policy landscape. For instance, after *Montgomery v. Louisiana*, states must review the cases of individuals incarcerated as juveniles for life without the possibility of parole for resentencing or parole consideration.[229] Additionally, legislation like the District of Columbia's Second Look Amendment Act of 2019 seeks to expand sentence-reduction eligibility for individuals convicted of an offense that occurred when they were between eighteen

TABLE 10: THREE-YEAR MURDER OR NONNEGLIGENT MANSLAUGHTER RECIDIVISM RATES BY TIME SERVED AND AGE AT RELEASE FOR INDIVIDUALS RELEASED AFTER A MURDER OR NONNEGLIGENT MANSLAUGHTER IMPRISONMENT[230]

Time Served	Age at Release From Imprisonment					
	18–24	25–34	35–44	45–54	55+	Any Age
< 1 year	3.65% [137]	4.12% [170]	0.91% [110]	1.96% [51]	0.00% [55]	2.68% [523]
1–1.9 year	4.43% [271]	3.96% [303]	2.19% [137]	2.25% [89]	1.56% [64]	3.47% [864]
2–4.9 year	2.43% [1,152]	1.61% [2,177]	0.95% [1,057]	1.26% [557]	0.58% [347]	1.55% [5,290]
5–9.9 year	1.97% [304]	1.92% [4,157]	1.10% [1,816]	0.12% [852]	0.00% [577]	1.39% [7,706]
≥ 10 year	n/a [0]	0.84% [1,427]	0.73% [3,027]	0.48% [2,704]	0.12% [2,441]	0.52% [9,599]
Total	2.74% [1,864]	1.77% [8,234]	0.91% [6,147]	0.56% [4,253]	0.17% [3,484]	1.18% [23,982]

and twenty-four years old after they have served fifteen years in prison (an avenue of relief currently available for sixteen- and seventeen-year-olds).[231] In our large sample, people who were between eighteen and twenty-four when initially imprisoned for murder or nonnegligent manslaughter and who were between the ages of thirty-five and forty-four at release are rein-

229 Montgomery v. Louisiana, 136 S. Ct. 718 (2016); *see also, e.g.*, Samantha Melamed, *Pennsylvania's Top Court Just Made It Way Harder to Sentence Kids to Life in Prison*, PHIL. INQUIRER (June 26, 2017), https://www.inquirer.com/philly/news/crime/pennsylvanias-top-court-just-made-it-way-harder-to-sentence-kids-to-life-in-prison-20170626.html.

230 For table notes, see *supra* note 213.

231 D.C. Council B. 127, Period 23 (D.C. 2019).

carcerated for another murder or nonnegligent manslaughter at a rate of just 0.69%; when they were released between forty-five and fifty-four the rate is 0.65%, and none of the people who were fifty-five or older upon release recidivate. These rates signify that such policies, aimed at releasing people who offend in their youths and who have already served many years, pose minimal risk to public safety. In fact, our regression analysis suggests that people convicted of violent crimes who have already been imprisoned a long time are at low risk of committing another violent offense, regardless of admission age (and older releasees tend to recidivate less frequently).[232]

Conclusion

Individuals convicted of violent crimes constitute a majority of the imprisoned population and are often ignored by existing proposals aimed at reducing incarceration's broad scope. Policies that seek to shrink the expansive prison population while ignoring prisoners who have committed violent offenses will fail to address the core of the problem and will likely exacerbate existing inequalities in the criminal justice system. And at this moment, the stakes are amplified by the risk of the spread of COVID-19 behind bars: older prisoners are especially at risk, but most of them have violent-crime convictions, which could stand in the way of measures taken to protect them. It has never been more important to understand whether the instinctive fear of violent recidivism that has long pervaded criminal justice policy is really grounded in fact.

This Article attempts to provide a better understanding of violent-crime recidivism to encourage policymakers to engage with the idea of releasing earlier many individuals who are serving sentences for violent crimes. Our synthesis of the recidivism literature and our new empirical analysis suggest that this population, especially individuals with prior homicide convictions who are older at release, are unlikely to reoffend, although they are somewhat more likely to commit new violent crimes relative to those released after serving time for nonviolent offenses.

Our analysis and most of the studies we review focus mainly on comparative questions: How do individuals convicted of violent and homicide offenses differ from those convicted of other types of crimes? These comparisons inform the question whether it makes sense to exclude "violent offenders" from sentencing reform and early-release policies that target individuals convicted of more minor crimes. Still, when tallying the costs and benefits of extending reforms to a new population, perhaps what matters more is the absolute rate of recidivism in that population. It bears emphasis that in every study, the vast majority (usually more than 99%) of those convicted of homi-

232 If we include age of admission into our regressions, we find that older admits tend to reoffend at lower rates (individuals over twenty-four on admission recidivate via murder or nonnegligent manslaughter slightly over 0.1 percentage points less often), raising the possibility that there may be room to expand these policies.

cide do not commit another homicide upon release.[233] Homicide is an especially socially harmful crime, so perhaps even a 1% rate is too high—we do not seek to resolve this normative question. But the low rate underscores that there are at least a great many people incarcerated for homicide that, in fact, pose little or no risk if and when they are released.

233 Of course, many caveats are necessary. Although general patterns are fairly similar across most studies, the details vary considerably based on place, time, and method. Moreover, by necessity, studies only investigate the reoffense behavior of individuals who have been released, as we stressed earlier in our discussion; it is possible that expanding early-release options (especially dramatically) would lead to the release of a more crime-prone cohort. The evidence we present is thus only suggestive, and we make no causal claims. However, as states begin to explore and implement policy changes that do extend to individuals convicted of violent crimes, it may become possible to carry out more rigorous analyses examining the impact of such reforms.