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The relative importance of racial and class inequality in incarceration in the United States has recently become the subject of considerable debate. In this paper, we seek to give this debate a stronger empirical foundation. First, we update previous research on racial and class inequality in people's likelihood of being imprisoned. Then we examine racial and class inequality in people's risk of having a family member imprisoned or living in a high-imprisonment neighborhood. We find that racial inequality in prison admissions has fallen in the twenty-first century, while class inequality has surged. However, in recent years, Black people with high levels of education and income were more likely than White people with low levels of education and income to experience the imprisonment of a family member or to live in a neighborhood with a high imprisonment rate. These seemingly contradictory conclusions can be reconciled by the fact that enduring structures of racial domination have made class boundaries among Black people more permeable than they are among White people. Imprisonment in the United States is increasingly reserved for the poor. But because Black Americans are disproportionately connected to the poor through their families and neighborhoods, racial inequality exceeds class inequality in people's indirect experiences with imprisonment.

Prisons in the United States are sites of stark racial and class inequality. Black people, poor people, and less educated people are incarcerated at disproportionately high rates (Gilmore 2007; Western and Pettit 2010; Wacquant 2010). Racial inequality in incarceration stretches back to the end of Reconstruction (Davis 1998; Muller 2018). It grew rapidly in the first half of the twentieth century, particularly during the first Great Black migration to the North (Muller 2012). During the prison boom in the late-twentieth century, racial inequality in incarceration remained consistently high while class inequality widened (Pettit and Western 2004; Western 2006; Pettit, Sykes, and Western 2009).

Recently, the relative importance of racial and class inequality in incarceration has become the subject of a sometimes intense debate. This is partly due to the reception of Michelle Alexander's bestselling book, *The New Jim Crow* (2010). Alexander's (2010) argument is broad and multifaceted, but critics took aim at its central metaphor, which they argued overshadowed rising rates of incarceration among groups other than Black Americans and growing class inequality in incarceration among Black and White Americans alike (Forman 2012; Gottschalk 2015).

However, the empirical basis for this debate has been limited in two important respects. First, our best estimates of class inequality in prison admissions end in 2001 (Western 2006). Given rising class inequality in mortality and other measures of well-being in the intervening years (Case and Deaton 2020, 2021), these estimates may understate the degree of class inequality in imprisonment today. Second, these estimates focus exclusively on racial and class inequality in an individual person's likelihood of going to prison. However, people experience the negative effects of imprisonment not just directly, but also indirectly through their families and neighborhoods. Because Black people are disproportionately connected to poor family members and poor neighborhoods (Pattillo-McCoy 1999; Pattillo 2005; Heflin and Pattillo 2006; Sharkey 2014), racial and class inequality in people's risk of having a family member imprisoned

or living in a high-imprisonment neighborhood may differ from racial and class inequality in their risk of being imprisoned themselves.

In this paper, we seek to set this debate on a stronger empirical foundation. Our primary aim is to describe recent patterns in racial and class inequality in incarceration, rather than to investigate their causes. First, we extend previous research on racial and class inequality in people's likelihood of being imprisoned through 2015. Then we report estimates of racial and class inequality in people's risk of having a family member imprisoned or living in a high-imprisonment neighborhood.

Using educational attainment as a proxy for class (Pettit and Western 2004; Western 2006; Western and Pettit 2010), we find that class inequality in imprisonment has surged. Racial inequality in prison admissions, in contrast, remains high but has declined. Falling racial inequality and rising class inequality in imprisonment partly reflect the continuation of late-twentieth-century trends: the prison admission rates of college-educated Black and White people continued to decrease while the prison admission rate of White people with no college education continued to increase. The exception is the prison admission rate of Black people with no college education, which, after sustained growth, fell precipitously beginning in 2000.

Our analysis shows that in the late-twentieth century, the Black–White disparity in imprisonment was comparable in magnitude to the disparity between people with no college education and people with some. However, in the twenty-first century, the no-college–any-college disparity grew to greatly exceed the Black–White disparity in imprisonment. In 2015, Black people with and without any college education were respectively 2.7 and 2.0 times likelier to be imprisoned than White people with the same education. By contrast, Black and White people with no college education were respectively 22 and 28 times likelier to be imprisoned than Black and White people with any college education. In the late 1980s and early 1990s, White people with no college education were admitted to prison at rates comparable to those of

college-educated Black people. By 2015, the prison admission rate of White people with no college education had grown to more than ten times that of Black people with any college education.

However, despite recent declines in racial inequality in prison admissions, we find that racial inequality exceeds class inequality in people's likelihood of having a family member imprisoned or living in a high-imprisonment neighborhood. High-education and high-income Black people are just as likely or likelier than low-education and low-income White people, respectively, to experience the imprisonment of a family member or to live in a neighborhood with a high imprisonment rate. Adjusting for household size, Black people with $100,000 in household income have the same likelihood of having a family member imprisoned as White people with $9,000 in household income. Black–White gaps in people's likelihood of living in a high-imprisonment neighborhood were larger than gaps between the most and least educated people and between the richest and poorest households.

Our analysis makes two principal contributions. First, we show that racial inequality in prison admissions declined in the early-twenty-first century, while class inequality in prison admissions reached alarming new extremes. Class inequality now exceeds racial inequality in prison admissions by an order of magnitude. Second, we use the concept of class permeability developed by Wright (1997) to make sense of why, despite this fact, racial inequality exceeds class inequality in family-member and neighborhood imprisonment. Because Black Americans are more likely than comparable White Americans to have poor family members and to live in poor neighborhoods, they are also more likely to experience the imprisonment of a family member and to live in a neighborhood with a high imprisonment rate. Taken together, these findings highlight the importance of precisely identifying how racial and class inequality in incarceration are intertwined.

Racial and class inequality in imprisonment

The explosive growth of incarceration in the United States at the end of the twentieth century has received an extraordinary amount of scholarly attention. But few books have reached as broad an audience as Michelle Alexander's *The New Jim Crow*. Alexander's book centered on how mass incarceration dramatically increased the number of people with criminal records—records that subject them to legal discrimination in housing, employment, education, and public benefits. The book devoted special attention to the War on Drugs, which disproportionately targeted Black people, due in part to the concentration of police in poor predominantly Black neighborhoods. Together, the social and legal consequences of having a criminal record and the over-representation of Black people among those with criminal records were two of the central motivations for Alexander's (2010, p. 11) conclusion that "mass incarceration is, metaphorically, the New Jim Crow."

Subsequent critiques of *The New Jim Crow* by James Forman Jr. and Marie Gottschalk argued that the book's central metaphor has important empirical and strategic shortcomings. Forman (2012, p. 21) notes that the analogy "obscures class distinctions within the African American community, and overlooks the effects of mass incarceration on other racial groups." Gottschalk (2015, p. 5) similarly contends that the metaphor overshadows the fact that poor people of other racial groups "have been a booming growth area for the carceral state." Although Forman and Gottschalk acknowledge the deep and brutal history of racial inequality in incarceration and share Alexander's goal of ending mass incarceration, they believe that downplaying mass incarceration's effects on poor people of other racial groups impedes the formation of a "broad political movement necessary to dramatically reduce the number of people in jail or prison" (Gottschalk 2015, p. 3). In short, if these groups are left out of conversations about the harm of incarceration, they will be "less likely to see a campaign against it as speaking to and for them" (Forman 2012, p. 65).

Forman and Gottschalk appeal to the work of Bruce Western, whose influential book, *Punishment and Inequality in America* (2006), showed that the late-twentieth-century rise in incarceration in the United States was typified by widening class inequality and relatively stable racial inequality in prison admissions. Western's (2006, p. 75) analysis, which ends in 2001, has not been updated. Thus, debates about racial and class inequality in incarceration in the early twenty-first century have taken place without an understanding of whether the trends Western identified have reversed, continued, or accelerated.

Recent work by Anne Case and Angus Deaton suggests that there are good reasons to believe that class inequality in incarceration has intensified. Case and Deaton (2020) document a dramatic twenty-first-century increase in the mortality rate of White people without a bachelor's degree, driven by deaths from suicide and alcohol and drug use. The mortality crisis among White people followed an earlier mortality crisis among Black people due to the epidemics of crack cocaine and HIV. Both crises, Case and Deaton (2020) note, were precipitated by large-scale job loss, particularly among low-education workers. To the extent that imprisonment, like mortality, reflects broad-based changes in people's life chances (Sen 1998; Wilson 1987; Autor, Dorn, and Hanson 2016), trends in imprisonment may track these trends in mortality (Beckett and Brydolf-Horwitz 2020).

Other scholars of have stressed the importance of studying the interaction of racial and class inequality in incarceration. Soss and Weaver (2017, p. 567), for instance, use the phrase *race–class subjugated communities* to draw attention to "the crucial interplay of race and class" in people's exposure to the carceral state. Wacquant (2010, p. 74) coins the term *hyperincarceration* to describe the "triple selectivity" of the United States' prison expansion: "first by class, second by race, and third by place." More generally, research on intersectionality has called on scholars to study the ways that racial and class inequality are intertwined (Collins 2015), while work on racial

capitalism has urged scholars to examine how racial domination is perpetuated by and integral to the dynamics of capitalist development (Robinson 2000 [1983]).

One way of responding to these calls is by studying racial inequality in what Erik Olin Wright (1997) calls class permeability. The concept of class permeability calls attention to the fact that people do not "simply fill locations within class structures. Their lives criss-cross the class structure in a variety of ways" (Wright and Cho 1992, p. 85). Wright (1997, p. 151) defines two kinds of permeability: *static* permeability, which refers to "patterns of social ties between people situated in different locations within a class structure," and *dynamic* permeability, which refers to "the ways in which biographical trajectories traverse different locations within class structures." People's ties to relatives or neighbors in other class locations are examples of static permeability. Intergenerational mobility is an example of dynamic permeability. Wright (1997, p. 150) argues that class permeability is important because it influences people's willingness to form "political coalitions across specific class boundaries." He further insists that it forces us to reconsider how we define class. "Rather than asking 'in what class is person X,'" Wright (1997, p. 277) proposes, "we should ask, 'what is the location of person X within a network of direct and mediated class relations.'" This second question enables us to see that the class position of a person with financial obligations to poor family members will not be adequately captured by studying their income or education alone (Chiteji and Hamilton 2002; Heflin and Pattillo 2006; O'Brien 2012).

Wright's analysis underscores that focusing exclusively on an individual person's class location can obscure how they may be tied to the poor through their families and neighborhoods, even if they are not poor themselves. Given the concentration of imprisonment among the poor, such people are also more likely to have family members who have been imprisoned and to live in neighborhoods with a high imprisonment rate. Although their experience with imprisonment is indirect, they are still harmed

by it, as a large body of research and personal testimony makes clear (Wilson 1987; Clear 2007; Comfort 2007; Bobo and Thompson 2010; Harris, Evans, and Beckett 2010; Sugie 2012; Wildeman and Muller 2012; Wakefield and Wildeman 2013; Morenoff and Harding 2014; Sykes and Pettit 2014; Lee et al. 2015; Allen 2017; Manduca and Sampson 2019; Chung and Hepburn 2018; Western 2018; Haskins and McCauley 2019; Reich and Prins 2020; Miller 2021). Moreover, because movements opposing mass incarceration have often been led by people with imprisoned family members and neighbors (Gilmore 2007), the composition of these movements will reflect not just class inequality, but class permeability as well.

Wright's research focuses on cross-national differences in class permeability. But the concept can be usefully applied to differences in the permeability of class boundaries among Black and White Americans. A large body of sociological scholarship suggests that enduring structures of racial domination have made class boundaries among Black people more permeable than they are among White people. This fact complicates a straightforward comparison of racial and class inequality in incarceration.

Black people in the United States have drastically lower levels of wealth than White people. The Black–White wealth gap originated in slavery and persisted through the systematic exclusion of Black Americans from land- and homeownership (Miller 2011; Faber 2020). Because of Black families' historically low levels of wealth, more upper- and middle-class Black people than upper- and middle-class White people are offshoots from poor family trees (Chiteji and Hamilton 2002; Pfeffer and Killewald 2019). Thus, compared to similar White people, upper- and middle-class Black people have a high likelihood of having poor family members both within and across generations. Heflin and Pattillo (2006), for example, show that middle-class Black people are much more likely than middle-class White people to have a poor sibling.

Black people also experience higher rates of downward mobility than White people. High and middle-income Black parents are more likely than high- and middle-income

White parents to have low-income children, whose risk of imprisonment is greater than that of the upper- and middle-class (Pfeffer and Killewald 2019; Chetty, Hendren, Jones, and Porter 2020). Chetty et al. (2020, p. 744–746) show that Black men whose parents had incomes in the top 1% of the income distribution had the same incarceration rate as White men whose parents had incomes at the 34th percentile. Upper- and middle-class Black Americans thus should be more likely than comparable White Americans to have imprisoned family members.

The long history of segregation, ghettoization, and housing discrimination in the United States has also meant that upper- and middle-class Black families are more likely than upper- and middle-class White families to live in or near poor neighborhoods (Massey and Denton 1993; Pattillo-McCoy 1999; Pattillo 2005; Wacquant 2012). Although the proportion of upper- and middle-class Black families residing in disadvantaged neighborhoods fell considerably in the late-twentieth century, in 2000, Black households making more than $100,000 a year lived, on average, in more disadvantaged neighborhoods than White households earning less than $30,000 a year (Sharkey 2014, pp. 927, 934; see also Reardon, Fox, and Townsend 2015). Given the concentration of police and imprisonment in poor predominantly Black neighborhoods (Sampson and Loeffler 2010; Wacquant 2010; Morenoff and Harding 2014; Simes 2018), upper- and middle-class Black families should consequently have greater exposure to high-imprisonment neighborhoods than their White counterparts.

In sum, recent increases in class inequality in mortality and other measures of well-being suggest that class inequality in incarceration has likely risen as well. But the fact that class boundaries among Black people are more permeable than they are among White people indicates that racial and class inequality in people's likelihood of being imprisoned may depart from racial and class inequality in their likelihood of having a family member imprisoned or living in a high-imprisonment neighborhood. The concept of class permeability offers a concise term for describing the consequence

of a diverse set of causes—Black–White wealth inequality, differences in downward mobility, and residential segregation, ghettoization, and housing discrimination—that contribute to racial inequality in people's kinship and residential ties to the poor. Here we use it to describe the interaction of racial and class inequality in incarceration, but the study of racial inequality in class permeability should extend beyond the domain of punishment.

The present study

In the following three empirical sections, we examine racial and class inequality in people's likelihood of being imprisoned, having a family member imprisoned, or living in a high-imprisonment neighborhood. In the first empirical section, we use restricted-access administrative data to extend Western's (2006) analysis of racial and class inequality in prison admissions through 2015. We focus on prison admissions for two reasons. First, they make our results comparable to those reported by Western (2006). Second, prison admission rates measure the flow of people into prison in a given year. This makes them a better measure of recent changes in imprisonment than imprisonment rates, which reflect both recent prison admissions and the lagged effect of earlier prison admissions. Although numerous studies, including the annual reports of the Bureau of Justice Statistics, have tracked changes in racial inequality in incarceration in the twenty-first century (Subramanian, Riley, and Mai 2018; Beckett and Brydolf-Horwitz 2020; Sabol, Johnson, and Caccavale 2020), these studies have not conducted parallel analyses of changes in class inequality in prison admissions.

In the second empirical section, we use new survey data to study racial and class inequality in people's likelihood of having a family member imprisoned. This analysis builds on previous research using survey data (Bobo and Thompson 2010; Wildeman and Wakefield 2014; Lee et al. 2015; Enns et al. 2019) and microsimulation techniques

(Chung and Hepburn 2018) to examine people's connections to incarcerated family members beyond parents. To our knowledge, only two previous studies have reported estimates of racial and class inequality in the incarceration of family members, broadly defined. Bobo and Thompson (2010) estimate the likelihood that Black and White people of different income and education levels had a friend or relative incarcerated. However, their analysis uses survey data from 2001 and 2002, whereas our estimates are based on data collected in 2018. Enns et al. (2019) use the same survey data we use to calculate the proportion of people in different racial and educational groups who had ever had a family member imprisoned. We extend this analysis in two ways. First, we directly estimate Black–White ratios at different educational levels and educational ratios among Black and White people. Second, we study income as well as education.

In the third empirical section, we use administrative data to estimate racial and class inequality in people's likelihood of living in a high-imprisonment neighborhood. Several studies (e.g., Sampson and Loeffler 2010; Simes 2018), have documented the extreme spatial concentration of incarceration. However, we know of no previous research that examines how people's exposure to high-imprisonment neighborhoods varies according to both their racial classification and their class location.

Due to the limits of existing data, we cannot measure class directly. This imposes two important restrictions on our analysis. First, we are forced to measure class *gradationally* rather than *relationally*, assigning people a class location based on their "quantitative degree of some attribute (income, status, education, etc.) and not by their location within a determinate relation" (Wright 1985, p. 34). Second, although some scholars view education as a measure of socioeconomic status rather than class (Sørensen 2000; Weeden and Grusky 2005), we follow scholars of punishment in using education as a proxy for class (Pettit and Western 2004; Western 2006; Western and Pettit 2010).

Nonetheless, studying educational inequality in imprisonment has some advantages.

Most simply, it makes our analysis of prison admissions comparable to previous research (e.g., Western 2006), which also focuses on educational inequality. But it also accords with the work of Case and Deaton (2020), which suggests that a college education is an increasingly salient divide and determinant of life chances in the twenty-first-century United States (see also Therborn 2013). Our data on prison admissions include no information about people's income, so in the first empirical section we restrict our focus to educational inequality. In the second and third empirical sections on family-member and neighborhood imprisonment, we report results using income as well as education. Our findings based on these two different measures are very similar.

Inequality in prison admissions over time

To estimate changes in racial and class inequality in imprisonment in the late-twentieth and early-twenty-first centuries, we build on a method pioneered by Western (2006, p. 80). Our principal data source is the National Corrections Reporting Program (NCRP), which is administered by the Bureau of Justice Statistics (BJS). The NCRP relies on the voluntary contributions of state correctional agencies, which submit data to BJS on every person entering prison with a criminal sentence each year. We use these restricted-access data to generate annual prison admission rates from 1984 to 2015 for four groups of people aged 20 to 39, defined by their racial and ethnic identification (Black non-Hispanic or White non-Hispanic) and their educational attainment (no years of college completed or at least one year of college completed). We follow Western (2006) in restricting our analysis to people aged 20 to 39. Appendix A reproduces our results for people aged 20 and older.

Although recent research highlights the divide in life chances between those with and without a bachelor's degree (Case and Deaton 2020), we examine the college–no college divide because the NCRP does not distinguish between prisoners with

associate's and bachelor's degrees. This has the advantage of making our results comparable to prior research (Western 2006; Pettit et al. 2009; Western and Pettit 2010). For simplicity and to maintain fidelity to the language that defines categories of people in the administrative data we use, we refer to the two racial groups as "Black people" and "White people," and to the two educational groups as having "no college" and "any college" education.

The states that participate in the NCRP account for vast majority of all state prison admissions over the period of analysis. However, different states report to the NCRP in different years. To generate national estimates, we calculate the proportion of admitted state prisoners observed in the NCRP in each year who belong to each racial–educational group. We then multiply these proportions by BJS (2017) estimates of the total number of people admitted to prison nationally in each year. This yields a national estimate of the number of people in each racial–educational group admitted to prison annually. Finally, we divide these estimates by population counts of each group from the Current Population Survey Merged Outgoing Rotation Groups (MORG) to generate a national prison admission rate for each group. Our approach rests on the assumption that people in each racial–educational group are admitted to prison in roughly the same proportion nationally as they are in the states we use to generate our estimates. This assumption should be kept in mind when interpreting our results.

The number of people with no college education fell considerably over the period we study. Therefore, the relative position of people with no college education at the end of the period of analysis is not directly comparable to that of people with a similar educational attainment at the beginning of the period. To address this, we standardize the Black and White educational groups to 2015. The adjusted educational groups represent people who would have completed no years of college in 2015 given their observed rank in the education distribution each year, and people who would have completed at least one year of college in 2015 given their observed rank in the education

distribution in each year. As a result, our approach compares fixed proportions of the educational attainment distribution across years. Appendix B describes our method of adjustment in greater detail and presents unadjusted results that are very similar to the main adjusted results.

The top panel of Figure 1 plots the estimated prison admission rate of the four categories of people we study. Several features of the plot stand out. First, and most noticeably, the prison admission rate of Black people with no college education was much higher than that of the other three categories of people throughout the duration of the period. It rose to a peak of 4,494 people per hundred thousand in 2000. Despite recent changes, Black people with low levels of education continue to be admitted to prison at much higher rates than any other group. Second, the Black no-college admission rate fell substantially from its peak in 2000 to 2,511 per hundred thousand in 2015. The beginning of the twenty-first century thus marked a turning point in the prison admission rate of Black people with low levels of education. Third, as the prison admission rate of Black people with no college education was falling, the prison admission rate of no-college White people was steadily rising. Recent scholarship has begun to document rising incarceration among White people (Muller and Schrage 2014; Subramanian et al. 2018; Beckett and Brydolf-Horwitz 2020; Sabol et al. 2020), but, with few exceptions (e.g., Oliver 2018), the extent to which this growth has been concentrated among those with little schooling has gone mostly unnoticed. Fourth, whereas the prison admission rate of White people with any college education stayed mostly stable, the rate for college-educated Black people fell from a peak of 755 per hundred thousand in 1990 to 113 per hundred thousand in 2015. Finally, the falling prison admission rate of Black people with any college education and the rising prison admission rate of White people with no college education created a widening gap between high-education Black people and low-education White people. These groups had similar prison admission rates in the late 1980s and early 1990s, but by 2015,

White people with no college education were more than ten times as likely to be admitted to prison as Black people with any college education.

[Figure 1 about here.]

Decreases in the prison admission rate of Black people both with and without any college education and increases in the prison admission rate of White people with no college education combined to produce declining racial disparities in prison admissions in the late-twentieth and early-twenty-first centuries. The middle panel of Figure 1 shows that the Black–White ratio in prison admissions among people with any college education fell from a peak of almost nine in 1990 to less than three in 2015. The Black–White ratio for people with no college remained lower than that for college-educated people, falling from a peak of more than six in 1993 to two in 2015. Racial inequality in imprisonment continues to be large, especially given that we are comparing people with the same levels of education. Moreover, some portion of the early-1990s peak in racial disparity in prison admissions likely reflects the drug war (Wright and Rogers 2011, p. 291–292), as suggested by Alexander (2010). But, after spiking in the late 1980s and early 1990s, racial inequality in prison admissions fell markedly through the mid-2010s, and this trend occurred roughly equally across educational groups.

As racial inequality fell, however, educational inequality skyrocketed. The bottom panel of Figure 1 plots the no-college–any-college ratio in prison admissions from 1984 to 2015. In 1984, Black and White people with no college education were respectively 5.4 and 6.3 times more likely to be admitted to prison than those with any college education. By 2015, that number more than quadrupled for Black people, reaching 22. The rise among White people was even more dramatic: by 2015, White people with no college education were 28 times more likely to be imprisoned than White people with any college education. Notably, class inequality among Black people was driven by differences in the magnitude of shared declines in imprisonment, whereas class

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inequality among White people was marked by increases in imprisonment among people with no college education and decreases among people with any college education.

Previous scholarship has documented that in the late-twentieth century, racial and class inequality in imprisonment were both high, but class inequality was increasing while racial inequality was fairly stable (Pettit and Western 2004; Western 2006; Pettit et al. 2009; Western and Pettit 2010). Our analysis shows that in the early-twenty-first century, racial inequality narrowed while class inequality grew wider. Racial inequality in prison admissions fell among both those who had and had not completed at least one year of college, but the disparities were highest among the more educated. Between 1984 and 2015, class inequality grew more than fourfold among both Black and White people.

Inequality in the imprisonment of a family member

The no-college–any-college ratio in prison admissions now greatly exceeds the comparable Black–White ratio. But the fact that upper- and middle-class Black people are more likely than comparable White people to have poor family members makes it likely that racial and class inequality in people's risk of having a family member imprisoned will differ from racial and class inequality in their risk of being imprisoned themselves (Heflin and Pattillo 2006; Chetty et al. 2020; Bobo and Thompson 2010). In this section, we examine racial and class inequality in the imprisonment of family members, using education and income as proxies for class.

Recently released data from the Family History of Incarceration Survey (FamHIS) (Enns et al. 2019) enable us to measure the proportion of people who had ever had a family member incarcerated as of 2018, when FamHIS was fielded. FamHIS was specifically designed to measure family-member incarceration. The survey included 4,041 respondents and had a 34% response rate. All of the results we report are

weighted to make them nationally representative of the U.S. household population aged 18 and older in 2018.

We focus on the imprisonment of immediate family members, defined in the survey as parents, siblings, children, current spouses, current romantic partners, or people with whom the respondent had a child. Step, foster, and adoptive family members were included. Rather than ask respondents to identify whether their family member had been incarcerated in a prison or a jail, FamHIS assumed that family members incarcerated for over a year had been imprisoned (Enns et al. 2019). We restrict our focus to family members who had been incarcerated for more than a year to make our results comparable to the analysis of imprisonment in the previous section.

Information about FamHIS respondents' household income, educational attainment, and racial and ethnic identification comes from the AmeriSpeak panel, which is administered by NORC at the University of Chicago. Using detailed responses about educational attainment, we sort respondents into four educational groups: people without a high school diploma; people with a high school diploma but no college education; people with some college education but no bachelor's degree, including those with associate's degrees; and people with a bachelor's degree or higher. Respondents were asked to report their household income by choosing one of 18 income bins ranging from "less than $5,000" to "$200,000 or more." We assign them the middle value of the income range they report, with values of $250,000 for the highest bin. We then divide this figure by the square root of the number of people in the respondent's household to adjust their household income by the size of their household (see, e.g., Johnson, Smeeding, and Torrey 2005, p. 13). As in the previous section, we refer to people who identified as "White non-Hispanic" and "Black non-Hispanic" as "White people" and "Black people," respectively.

The left column of Figure 2 reports estimates from a nonparametric model estimating the probability of family-member imprisonment among each racial and educational

group. Black people's likelihood of experiencing the imprisonment of a family member remained higher than that of White people across the education distribution. The middle left panel shows that Black–White disparities in family-member imprisonment were greatest at the highest education levels.This finding parallels the fact that racial inequality in prison admissions is higher among the college educated, as shown in the middle panel of Figure 1.

[Figure 2 about here.]

But an important difference between imprisonment and family-member imprisonment is also apparent. The top panel of Figure 1 illustrates that in the 2010s, White people with no college education were much more likely than Black people with any college education to be imprisoned. In contrast, the top left panel of Figure 2 shows that White people with a high school diploma or less experienced the imprisonment of a family member at rates that were comparable to or lower than those of Black people with bachelor's degrees or more. Indeed, if we divide respondents into those with no college education and those with any college education, to mirror the analysis in the previous section, we see that racial disparities were greater than educational disparities in people's risk of having a family member imprisoned. The probability of family-member imprisonment was .29 among college-educated Black people and .16 among White people with no college education. Racial disparities, both among people with any college education (3.87:1) and among people with none (2.29:1), were larger than educational disparities among both White people (2.18:1) and Black people (1.29:1).

The bottom left panel of Figure 2 shows the proportional change in the probability of having a family member imprisoned associated with moving up one educational category. The two most important educational transitions for both groups were receiving a high school diploma and a bachelor's degree, both of which were associated

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with reductions in the likelihood of experiencing the imprisonment of a family member. But the difference across these education levels was larger for White people.

The upper right panel of Figure 2 shows that people's likelihood of having a family member imprisoned declined as their household income increased. But the relationship between income and family-member imprisonment was different for each group. The poorest Black people had an extremely high likelihood of having a family member imprisoned, and incomes at the poverty line were associated with much lower probabilities of family-member imprisonment. Above poverty levels, however, Black people's risk of family-member imprisonment varied little by household income, never falling below one in five. Black people with $100,000 in adjusted household income had the same risk of having a family member imprisoned as White people with $9,000 in adjusted household income. The declining returns to income for Black people can be seen most clearly in the bottom right panel of Figure 2, which plots the proportional change in the likelihood of having a family member imprisoned for each additional dollar in adjusted household income. For Black people, proportional decreases in family-member imprisonment became statistically insignificant at adjusted household incomes above $24,000, just below the 2018 poverty line for a family of four. For White people, in contrast, increased income was associated with statistically significant decreases in the risk of family-member imprisonment up to adjusted household income levels of $55,000.

Despite recent declines in racial inequality in people's risk of being imprisoned, racial inequality exceeds class inequality in people's risk of having a family member imprisoned. Both Black and White people's likelihood of having a family member imprisoned fell with increases in educational attainment and household income, but for Black people the returns to income tapered off near the poverty line whereas for White people they continued into middle incomes. High-education and high-income Black people experienced the imprisonment of a family member at similar rates to

low-education and low-income White people. This is in contrast to low-education
White people's dramatically higher prison admission rate.

Inequality in neighborhood imprisonment

Previous sociological scholarship has shown that Black people are not only more likely
than comparable White people to have poor family members—they are also more
likely to live in poor neighborhoods (Pattillo-McCoy 1999; Pattillo 2005; Sharkey
2014). Because incarceration is highly concentrated in poor neighborhoods (Sampson
and Loeffler 2010; Morenoff and Harding 2014; Simes 2018), racial and class inequality
in neighborhood imprisonment should therefore differ from racial and class inequality
in prison admissions. In this section, we examine racial and class inequality in people's
likelihood of living in a neighborhood with a high imprisonment rate, again using
education and income as proxies for class.

To estimate racial and class inequality in people's exposure to high-imprisonment
neighborhoods, we use census tracts as a proxy for neighborhoods. We calculate
census-tract imprisonment rates using data from the Justice Atlas of Sentencing
and Corrections (Justice Mapping Center 2010). The Justice Atlas uses prisoners'
pre-commitment residential address to calculate census tract-level counts of state
prison admissions in 2008 for twenty states: Alaska, Arkansas, Georgia, Indiana, Iowa,
Kansas, Kentucky, Louisiana, Michigan, Mississippi, Nebraska, New York, North
Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Texas, and
West Virginia. Admissions were originally geocoded to 2000 census tracts, so we
use the Longitudinal Tract Database (Logan, Xu, and Stults 2014) to convert the
counts to 2010 geographies. We then calculate the prison admission rate of each
tract by dividing the admissions count by the total tract population aged 15 to
64, estimated using 5-year 2010 American Community Survey (ACS) data (Manson

et al. 2019). We restrict the age range of the denominator to reflect the population generally at risk of imprisonment. Next, we divide tracts into four types based on their level of imprisonment: low imprisonment (the bottom half of all tracts), moderate imprisonment (the 50th to 75th percentiles), high imprisonment (the 75th to 95th percentiles), and very high imprisonment (the top five percent).

We then use ACS data to measure the distribution of the population across census tracts. To examine educational inequality, we calculate the number of people aged 25 years and older living in each tract, by racial identification and educational attainment. To examine income inequality, we calculate the number of households of each income quintile in each census tract, separately by the racial identification of householders. We calculate income quintiles using the entire U.S. household population. Finally, we calculate the share of each racial–education and racial–income group that resides in each type of census tract (low, moderate, high, and very high imprisonment).

The left column of Figure 3 plots the share of people 25 years and older residing in low-, moderate-, high-, and very high-imprisonment neighborhoods, separately for each racial–educational group. The plot is complex, so it is worth pausing to explain it. The lowermost blue point in the top left panel, for example, indicates that 15% of Black people with less than a high school degree lived in the five percent of census tracts with the highest imprisonment rates. As we move up the distribution of educational attainment, we see that a smaller share of each education group resides in neighborhoods with the highest imprisonment rates. The bottom left panel of Figure 3 shows that the opposite is true of the lowest imprisonment neighborhoods. In each panel, we draw a dashed line to indicate the proportion of all neighborhoods belonging to each of the four levels of neighborhood imprisonment. Assuming that tracts contain roughly equal numbers of residents, a racially and educationally equal distribution of the population across neighborhood types would result in all the points aligning on the dashed lines.

Our analysis of educational inequality in prison admissions showed that low-education White people are admitted to prison at drastically higher rates than high-education Black people. However, the left column of Figure 3 shows that the highest-education Black people had more than twice the likelihood of living in a very high-imprisonment neighborhood than the lowest education White people. Black people with a bachelor's degree or more were also more likely than White people who did not complete high school to live in high-imprisonment neighborhoods and less likely than the lowest education White people to live in low-imprisonment neighborhoods.

If we divide respondents into those with no college and any college education to mirror the analysis in the first section, we find that, on average, White people with and without a college education lived in neighborhoods with imprisonment rates of 166 and 213 per 100,000, respectively, whereas Black people with and without a college education lived in neighborhoods with imprisonment rates of 402 and 534 per 100,000, respectively. Educational disparities, both among White people (1.29:1) and among Black people (1.33:1) were smaller than racial disparities among people with any college education (2.42:1) and people with none (2.50:1).

The center column of Figure 3 plots the Black–White ratio of the likelihood of residence in each neighborhood type, by educational attainment. Racial inequality in people's likelihood of living in a very high-imprisonment neighborhood was the most severe: Black people of all levels of education resided in these neighborhoods at at least five times the rate of comparable White people. Educational inequality in people's risk of residing in a neighborhood with a very high imprisonment rate, in contrast, was about half as large: Black and White people without a high school diploma were, respectively, 2.6 and 2.7 times more likely to live in very high-imprisonment neighborhoods than those with bachelor's degrees. The right column of Figure 3 shows the ratio of the likelihood of residence in each neighborhood type for each educational

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group compared to the group immediately below.

Figure 4 mirrors Figure 3, evaluating income inequality rather than educational inequality in people's likelihood of living in neighborhoods with high and low rates of imprisonment. The patterns reported in the two figures are very similar. The richest Black households were more likely to live in high- and very high-imprisonment neighborhoods than the poorest White households. Black and White people in the first income quintile were respectively 3.8 and 3.9 times likelier than their counterparts in the fifth income quintile to live in very high-imprisonment neighborhoods, whereas Black households of all income quintiles were between 5.6 and 6.8 times likelier to reside in these neighborhoods than comparable White households.

[Figure 4 about here.]

As with the experience of having a family member imprisoned, racial inequality was greater than class inequality in the experience of living in a neighborhood with a high imprisonment rate. Across all educational categories and income quintiles, racial gaps in people's likelihood of living in a very high-imprisonment neighborhood were larger than gaps between the most and least educated people and between the richest and poorest households. Although in 2008 the prison admission rate of Black people with any college education was much lower than that of White people with no college education, college-educated Black people were more likely than White people with no college education to live in neighborhoods with high or very high rates of imprisonment.

Limitations

Our analysis has several important limitations. The first concerns imperfections in the data we use to calculate racial and class inequality in neighborhood imprisonment

rates. These data are limited in two relevant ways. First, the Justice Atlas measures neighborhood imprisonment with some error. State corrections agencies may have failed to report some admissions, and 5 to 25% of reported admissions had missing or unusable address information. Second, the Justice Atlas comprises a nonrepresentative sample of states. These limitations may bias our estimates or make them ungeneralizable. Appendix C discusses these limitations in detail, and presents results using an alternative source of incarceration data (Chetty et al. 2018) that are consistent with the main results.

A second limitation is that the way we measure inequality in family-member imprisonment differs from the way we measure inequality in prison admissions and neighborhood prison admissions. As noted above, the prison admission rate is a flow that changes every year. In contrast, whether a person has ever had a family member imprisoned reflects recent prison admissions and prison admissions that took place many years ago. However, two sources of evidence suggest that the divergence of our findings about racial and class inequality in prison admissions, neighborhood prison admissions, and family-member imprisonment is not an artifact of measurement. First, our findings about family-member imprisonment closely mirror our findings about neighborhood imprisonment, which are based on a flow measure. Second, as we show in Appendix C, using a stock measure of neighborhood imprisonment yields similar results to the main analysis.

A third limitation is that our analysis centers exclusively on racial and class inequality in imprisonment. Future research should examine additional forms of contact with police, courts, jails, and prisons (e.g., Hepburn, Kohler-Hausmann, and Medina 2019) and additional dimensions of inequality. Recent research on jails indicates that the decline in racial inequality in imprisonment that we document has not been offset by increasing Black jail incarceration rates: the White jail incarceration rate steadily increased between 1990 and 2013, particularly in rural areas and small cities, whereas

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the Black jail incarceration rate recently began to fall (Subramanian et al. 2018). Racial inequality in federal sentencing has also markedly declined (Light 2021). How the trends we describe differ across rural and urban America (e.g., Eason, Zucker, and Wildeman 2017; Oliver 2018; Beckett and Beach 2020; Gottschalk 2020) and across other educational divides are important subjects for future investigation. Scholars should also study changes in gender inequality in incarceration (Sabol et al. 2020).

The most important limitation of our analysis, however, is that there is a historical dimension of racial inequality in incarceration that it does not capture. Black Americans have faced brutal and unequal treatment by police and courts at least since the end of Reconstruction: from the convict lease system (Du Bois 1901; Lichtenstein 1996; Davis 1998; Haley 2016; Muller 2018) through southern chain gangs (Lichtenstein 1996; Haley 2016) and racist policing in the North (Muhammad 2010; Muller 2012; Hinton 2016). This history has left many Black people—both poor and not—distrustful of and estranged from police and courts (Du Bois 1901; Muller and Schrage 2014; Bell 2017). It has also given rise to a pernicious ideological association between "blackness and criminality" that negatively affects Black people irrespective of their class (Davis 1998; Wacquant 2001; Muhammad 2010). Even if racial inequality in incarceration were completely eliminated, it is likely that these historical effects would linger.

Conclusion

Michelle Alexander's *The New Jim Crow* (2010) drew widespread public attention to how mass incarceration and its attendant social and legal consequences have relegated vast numbers of people—particularly Black people—to a kind of second-class citizenship. It also sparked a debate about the relative importance of racial and class inequality in imprisonment. However, this debate has rested on an out-of-date and incomplete empirical foundation. In this paper, we have sought to strengthen that

foundation.

We find that the rise in class inequality in prison admissions documented by Western (2006) and emphasized by Forman (2012) and Gottschalk (2015) has intensified. Beginning in the twenty-first century, the prison admission rate of Black people with no college education began to decrease alongside that of college-educated Black people. Meanwhile, the prison admission rate of White people with no college education steadily grew. This led to significant decreases in racial inequality in imprisonment and dramatic increases in educational inequality in imprisonment. In the late-twentieth century, the no-college–any-college disparity in prison admissions was comparable in magnitude to the Black–White disparity. By 2015, it was roughly ten times higher.

However, in recent years, racial inequality exceeded class inequality in people's likelihood of having a family member imprisoned or living in a high-imprisonment neighborhood. Although White people with no college education were more than ten times as likely as college-educated Black people to be admitted to prison in 2015, they were roughly half as likely to have a family member imprisoned. The average White person with no college education also lived in a neighborhood with an imprisonment rate about half as large as that of the average college-educated Black person.

Taken together, these findings offer theoretical, empirical, and political lessons. First, the concept of class permeability can help us to make sense of ongoing debates about the scale and salience of racial and class inequality in incarceration. Imprisonment in the United States is increasingly reserved for the poor. But because Black people are disproportionately connected to the poor through their families and neighborhoods, racial inequality has remained larger than class inequality in family-member and neighborhood imprisonment. Class inequality now exceeds racial inequality in prison admissions by much more than racial inequality exceeds class inequality in family-member and neighborhood imprisonment. But many more people are affected by having a family member imprisoned or by living in a neighborhood with a high

imprisonment rate than are imprisoned themselves. This helps to explain why, despite the declining scale of racial inequality in prison admissions, incarceration remains such a salient part of the lives of many Black people in the United States.

The concept of class permeability also offers a concrete framework for studying the entanglement of racial and class inequality in domains beyond incarceration. By attending to the ways that racial and class inequality jointly affect not just people's individual circumstances, but also the structure of their social ties, we can better understand why patterns of inequality in people's direct experience sometimes diverge from patterns of inequality in their indirect experience. Future research should extend the study of racial inequality in class permeability to domains like mortality and wealth (Umberson et al. 2017; O'Brien 2012).

Second, although our primary objective has been to describe rather than to explain patterns in racial and class inequality in imprisonment, the trends we document should help to direct future research into their causes. Our findings underscore that understanding inequality in incarceration in the twenty-first century entails identifying mechanisms that generate class inequality, mechanisms that generate racial inequality, and how those mechanisms interrelate. The rise in class inequality in prison admissions among both Black and White people points to causes that have successively affected low-income and low-education members of both racial groups, such as under- and unemployment and the epidemics of crack cocaine and opioids (Wilson 1987; Autor et al. 2016; Case and Deaton 2020, 2021; Gottschalk 2020). Large racial inequality in family-member and neighborhood imprisonment suggests that persistent wealth gaps, differences in downward mobility, and residential segregation, ghettoization, and housing discrimination have contributed not only to racial inequality in imprisonment, but also to Black–White differences in class permeability (Pfeffer and Killewald 2019; Chetty et al. 2020; Massey and Denton 1993; Pattillo 2005; Wacquant 2012). Future research should also study the causes of the dramatic decline in imprisonment among

Black people with no college education. Beckett and Brydolf-Horwitz (2020) suggest that the deescalation of the drug war in cities, where Black people disproportionately reside, may be one reason for falling racial inequality in imprisonment.

Finally, studying both class inequality and class permeability can inform our understanding of the composition of movements opposing mass incarceration. Imprisonment is increasingly concentrated among America's poor—both Black and White—but its indirect effects are disproportionately felt by Black people, both poor and not. These facts are an indictment of the United States' political economy, weak social policy, and enduring structures of racial domination. But they also may provide a material basis for broad coalitions aimed at ending our reliance on incarceration and fighting the poverty and inequality that sustain it (Gilmore 2007; Forman 2012; Gottschalk 2015; Taylor 2016; Terry and Lee 2017).

References

Alexander, Michelle. 2010. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: The New Press.

Allen, Danielle. 2017. *Cuz: The Life and Times of Michael A.* New York: Liveright.

Autor, David H., David Dorn, and Gordon H. Hanson. 2016. "The China Shock: Learning from Labor-Market Adjustment to Large Changes in Trade." *Annual Review of Economics* 8:205–240.

Beckett, Katherine and Lindsey Beach. 2020. "The Place of Punishment in Twenty-First-Century America: Understanding the Persistence of Mass Incarceration." *Law & Social Inquiry* pp. 1–31.

Beckett, Katherine and Marco Brydolf-Horwitz. 2020. "A Kinder, Gentler Drug War? Race, Drugs, and Punishment in 21st Century America." *Punishment & Society* 22:509–533.

Bell, Monica C. 2017. "Police Reform and the Dismantling of Legal Estrangement." *Yale Law Journal* pp. 2054–2150.

Bobo, Lawrence D. and Victor Thompson. 2010. "Racialized Mass Incarceration: Poverty, Prejudice, and Punishment." In *Doing Race: 21 Essays for the 21st Century*, edited by Hazel Rose Markus and Paula M. L. Moya. New York: Norton.

Bureau of Justice Statistics. 2017. *Number of Admissions of Sentenced Prisoners to State or Federal Prisons, 1978-2016*. Generated Using the Corrections Statistical Analysis Tool quick tables at www.bjs.gov.

Case, Anne and Angus Deaton. 2020. *Deaths of Despair and the Future of Capitalism*. Princeton: Princeton University Press.

Case, Anne and Angus Deaton. 2021. "Life expectancy in adulthood is falling for those without a BA degree, but as educational gaps have widened, racial gaps have narrowed." *PNAS* 118:1–6.

Chetty, Raj, John Friedman, Nathaniel Hendren, Maggie Jones, and Sonya Porter. 2018. "The Opportunity Atlas: Mapping the Childhood Roots of Social Mobility." National Bureau of Economic Research Working Paper No. 25147.

Chetty, Raj, Nathaniel Hendren, Maggie R. Jones, and Sonya R. Porter. 2020. "Race and Economic Opportunity in the United States: An Intergenerational Perspective." *Quarterly Journal of Economics* 135:711–783.

Chiteji, N. S. and Darrick Hamilton. 2002. "Family Connections and the Black-White Wealth Gap among Middle-Class Families." *The Review of Black Political Economy* 30:9–28.

Chung, Pil H. and Peter Hepburn. 2018. "Mass Imprisonment and the Extended Family." *Sociological Science* 5:335–360.

Clear, Todd. 2007. *Imprisoning Communities: How Mass Incarceration Makes Disadvantaged Neighborhoods Worse*. Oxford: Oxford University Press.

Collins, Patricia Hill. 2015. "Intersectionality's Definitional Dilemmas." *Annual Review of Sociology* 41:1–20.

Comfort, Megan. 2007. "Punishment Beyond the Legal Offender." *Annual Review of Law and Social Science* 3:271–96.

Davis, Angela Y. 1998. "From the Prison of Slavery to the Slavery of the Prison: Frederick Douglass and the Convict Lease System." In *The Angela Y. Davis Reader*, edited by Joy James, pp. 74–95. Malden, MA: Blackwell.

Du Bois, W. E. B. 1901. "The Spawn of Slavery: The Convict-Lease System in the South." *Missionary Review of the World* 14:737–745.

Eason, John M., Danielle Zucker, and Christopher Wildeman. 2017. "Mass Imprisonment across the Rural-Urban Interface." *Annals of the American Academy of Political and Social Science* 672:202–216.

Enns, Peter K., Youngmin Yi, Megan Comfort, Alyssa W. Goldman, Hedwig Lee, Christopher Muller, Sara Wakefield, Emily A. Wang, and Christopher Wildeman. 2019. "What Percentage of Americans Have Ever Had a Family Member Incarcerated?: Evidence from the Family History of Incarceration Survey (FamHIS)." *Socius* 5:1–45.

Faber, Jacob W. 2020. "We Built This: Consequences of New Deal Era Intervention in America's Racial Geography." *American Sociological Review* 85:739–775.

Forman, James. 2012. "Racial Critiques of Mass Incarceration: Beyond the New Jim Crow." *New York University Law Review* 87:101–146.

Gilmore, Ruth Wilson. 2007. *Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California*. Berkeley, CA: University of California Press.

Gottschalk, Marie. 2015. *Caught: The Prison State and the Lockdown of American Politics*. Princeton: Princeton University Press.

Gottschalk, Marie. 2020. "Caught in the Countryside: Race, Class, and Punishment in Rural America." *Political Power and Social Theory* 37:25–52.

Haley, Sarah. 2016. *No Mercy Here: Gender, Punishment, and the Making of Jim Crow Modernity*. Chapel Hill: University of North Carolina Press.

Harris, Alexes, Heather Evans, and Katherine Beckett. 2010. "Drawing Blood from Stones: Legal Debt and Social Inequality in the Contemporary United States." *American Journal of Sociology* 115:1753–1799.

Haskins, Anna R. and Erin J. McCauley. 2019. "Casualties of Context? Risk of Cognitive, Behavioral and Physical Health Difficulties among Children Living in High-Incarceration Neighborhoods." *Journal of Public Health* 27:175–183.

Heflin, Colleen M. and Mary Pattillo. 2006. "Poverty in the Family: Race, Siblings, and Socioeconomic Heterogeneity." *Social Science Research* 35:804–822.

Hepburn, Peter, Issa Kohler-Hausmann, and Angela Zorro Medina. 2019. "Cumulative Risks of Multiple Criminal Justice Outcomes in New York City." *Demography* 56:1161–1171.

Hinton, Elizabeth. 2016. *From the War on Poverty to the War on Crime: The Making of Mass Incarceration in America*. Cambridge, MA: Harvard University Press.

Johnson, David S., Timothy M. Smeeding, and Barbara Boyle Torrey. 2005. "Economic Inequality Through the Prisms of Income and Consumption." *Monthly Labor Review* 11:11–24.

Justice Mapping Center. 2010. *Justice Atlas of Sentencing and Corrections [Database]*. http://www.justiceatlas.org.

Lee, Hedwig, Tyler McCormick, Margaret T. Hicken, and Christopher Wildeman. 2015. "Racial Inequalities in Connectedness to Imprisoned Individuals in the United States." *Du Bois Review* 12:269–282.

Lichtenstein, Alex. 1996. *Twice The Work of Free Labor: The Political Economy of Convict Labor in the New South*. New York: Verso.

Light, Michael T. 2021. "The Declining Significance of Race in Criminal Sentencing: Evidence from US Federal Courts." *Social Forces* pp. 1–32.

Logan, John R., Zengwang Xu, and Brian J. Stults. 2014. "Interpolating U.S. Decennial Census Tract Data from as Early as 1970 to 2010: A Longitudinal Tract Database." *The Professional Geographer* 66:412–420.

Manduca, Robert and Robert J. Sampson. 2019. "Punishing and Toxic Neighborhood Environments Independently Predict the Intergenerational Social Mobility of Black and White Children." *PNAS* 116:7772–7777.

Manson, Steven, Jonathan Schroeder, David Van Riper, and Steven Ruggles. 2019. *IPUMS National Historical Geographic Information System: Version 14.0 [Database]*. Minneapolis, MN: IPUMS. http://doi.org/10.18128/D050.V14.0.

Massey, Douglass and Nancy Denton. 1993. *American Apartheid: Segregation and the Making of the Underclass*. Cambridge, MA: Harvard University Press.

Miller, Melinda C. 2011. "Land and Racial Wealth Inequality." *American Economic Review: Papers and Proceedings* 101:371–76.

Miller, Reuben Jonathan. 2021. *Halfway Home: Race, Punishment, and the Afterlife of Mass Incarceration*. New York: Little Brown.

Morenoff, Jeffrey D. and David J. Harding. 2014. "Incarceration, Prisoner Reentry, and Communities." *Annual Review of Sociology* 40:411–429.

Muhammad, Khalil Gibran. 2010. *The Condemnation of Blackness: Race, Crime, and the Making of Modern Urban America*. Cambridge, MA: Harvard University Press.

Muller, Christopher. 2012. "Northward Migration and the Rise of Racial Disparity in American Incarceration, 1880–1950." *American Journal of Sociology* 118:281–326.

Muller, Christopher. 2018. "Freedom and Convict Leasing in the Postbellum South." *American Journal of Sociology* 124:367–405.

Muller, Christopher and Daniel Schrage. 2014. "Mass Imprisonment and Trust in the Law." *Annals of the American Academy of Political and Social Science* 651:139–158.

O'Brien, Rourke L. 2012. "Depleting Capital? Race, Wealth and Informal Financial Assistance." *Social Forces* 91:375–396.

Oliver, Pamela. 2018. "Education and Poverty as Factors in White and Black Rural and Urban Prison Admission Rates." *SocArXiv* .

Pattillo, Mary. 2005. "Black Middle-Class Neighborhoods." *Annual Review of Sociology* 31:305–329.

Pattillo-McCoy, Mary. 1999. *Black Picket Fences: Privilege and Peril among the Black Middle Class*. Chicago: University of Chicago Press.

Pettit, Becky, Bryan Sykes, and Bruce Western. 2009. *Technical Report on Revised Population Estimates and NLSY79 Analysis Tables for the Pew Public Safety and Mobility Project*. Cambridge, MA: Harvard University.

Pettit, Becky and Bruce Western. 2004. "Mass Imprisonment and the Life Course: Race and Class Inequality in U.S. Incarceration." *American Sociological Review* 69:151–169.

Pfeffer, Fabian T. and Alexandra Killewald. 2019. "Intergenerational Wealth Mobility and Racial Inequality." *Socius* 5:1–2.

Reardon, Sean F., Lindsay Fox, and Joseph Townsend. 2015. "Neighborhood Income Composition by Household Race and Income, 1990–2009." *Annals of the American Academy of Political and Social Science* 660:78–97.

Reich, Adam D. and Seth J. Prins. 2020. "The Disciplining Effect of Mass Incarceration on Labor Organization." *American Journal of Sociology* 125:1303–1344.

Robinson, Cedric J. 2000 [1983]. *Black Marxism: The Making of the Black Radical Tradition*. Chapel Hill: University of North Carolina Press.

Sabol, William J., Thaddeus L. Johnson, and Alexander Caccavale. 2020. "Trends in Correctional Control by Race and Sex." *Federal Sentencing Reporter* 32:157–177.

Sampson, Robert J. and Charles Loeffler. 2010. "Punishment's Place: The Local Concentration of Mass Incarceration." *Daedalus* 139:20–31.

Sen, Amartya. 1998. "Mortality as an Indicator of Economic Success and Failure." *Economic Journal* 108:1–25.

Sharkey, Patrick. 2014. "Spatial Segmentation and the Black Middle Class." *American Journal of Sociology* 119:903–954.

Simes, Jessica T. 2018. "Place and Punishment: The Spatial Context of Mass Incarceration." *Journal of Quantitative Criminology* 34:513–533.

Sørensen, Aage B. 2000. "Toward a Sounder Basis for Class Analysis." *American Journal of Sociology* 105:1523–1558.

Soss, Joe and Vesla Weaver. 2017. "Police Are Our Government: Politics, Political Science, and the Policing of Race–Class Subjugated Communities." *Annual Review of Political Science* 20:565–591.

Subramanian, Ram, Kristine Riley, and Chris Mai. 2018. *Divided Justice: Trends in Black and White Jail Incarceration, 1990–2013*. New York: Vera Institute of Justice.

Sugie, Naomi F. 2012. "Punishment and Welfare: Paternal Incarceration and Families' Receipt of Public Assistance." *Social Forces* 90:1403–1427.

Sykes, Bryan L. and Becky Pettit. 2014. "Mass Incarceration, Family Complexity, and the Reproduction of Childhood Disadvantage." *Annals of the American Academy of Political and Social Science* 654:127–159.

Taylor, Keeanga-Yamahtta. 2016. *From #BlackLivesMatter to Black Liberation*. Chicago: Haymarket Books.

Terry, Brandon M. and Jason Lee. 2017. "Rethinking the Problem of Alliance: Organized Labor and Black Political Life." *New Labor Forum* 26:16–26.

Therborn, Göran. 2013. *The Killing Fields of Inequality*. Cambridge: Polity.

Umberson, Debra, Julie Skalamera Olson, Robert Crosnoe, Hui Liu, Tetyana Pudrovska, and Rachel Donnelly. 2017. "Death of Family Members as an Overlooked Source of Racial Disadvantage in the United States." *PNAS* 114:915–920.

Wacquant, Loïc. 2001. "Deadly Symbiosis: When Ghetto and Prison Meet and Mesh." *Punishment and Society* 3:95–134.

Wacquant, Loïc. 2010. "Class, Race and Hyperincarceration in Revanchist America." *Daedalus* 139:74–90.

Wacquant, Loïc. 2012. "A Janus-Faced Institution of Ethnoracial Closure: A Sociological Specification of the Ghetto." In *The Ghetto: Contemporary Global Issues and Controversies*, edited by Ray Hutchison and Bruce D. Haynes, pp. 1–32. Boulder, CO: Westview.

Wakefield, Sara and Christopher Wildeman. 2013. *Children of the Prison Boom: Mass Incarceration and the Future of American Inequality*. Oxford: Oxford University Press.

Weeden, Kim A. and David B. Grusky. 2005. "The Case for a New Class Map." *American Journal of Sociology* 111:141–212.

Western, Bruce. 2006. *Punishment and Inequality in America*. New York: Russell Sage.

Western, Bruce. 2018. *Homeward: Life in the Year After Prison*. New York: Russell Sage.

Western, Bruce and Becky Pettit. 2010. "Incarceration & Social Inequality." *Daedalus* 139:8–19.

Wildeman, Christopher and Christopher Muller. 2012. "Mass Imprisonment and Inequality in Health and Family Life." *Annual Review of Law and Social Science* 8:11–30.

Wildeman, Christopher and Sara Wakefield. 2014. "The Long Arm of the Law: The Concentration of Incarceration in Families in the Era of Mass Incarceration." *Journal of Gender, Race & Justice* 17:367–389.

Wilson, William Julius. 1987. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago: University of Chicago Press.

Wright, Erik Olin. 1985. *Classes*. London: Verso.

Wright, Erik Olin. 1997. *Class Counts: Comparative Studies in Class Analysis*. Cambridge: Cambridge University Press.

Wright, Erik Olin and Donmoon Cho. 1992. "The Relative Permeability of Class Boundaries to Cross-Class Friendships: A Comparative Study of the United States, Canada, Sweden, and Norway." *American Sociological Review* 57:85–102.

Wright, Erik Olin and Joel Rogers. 2011. *American Society: How it Really Works*. New York: Norton.
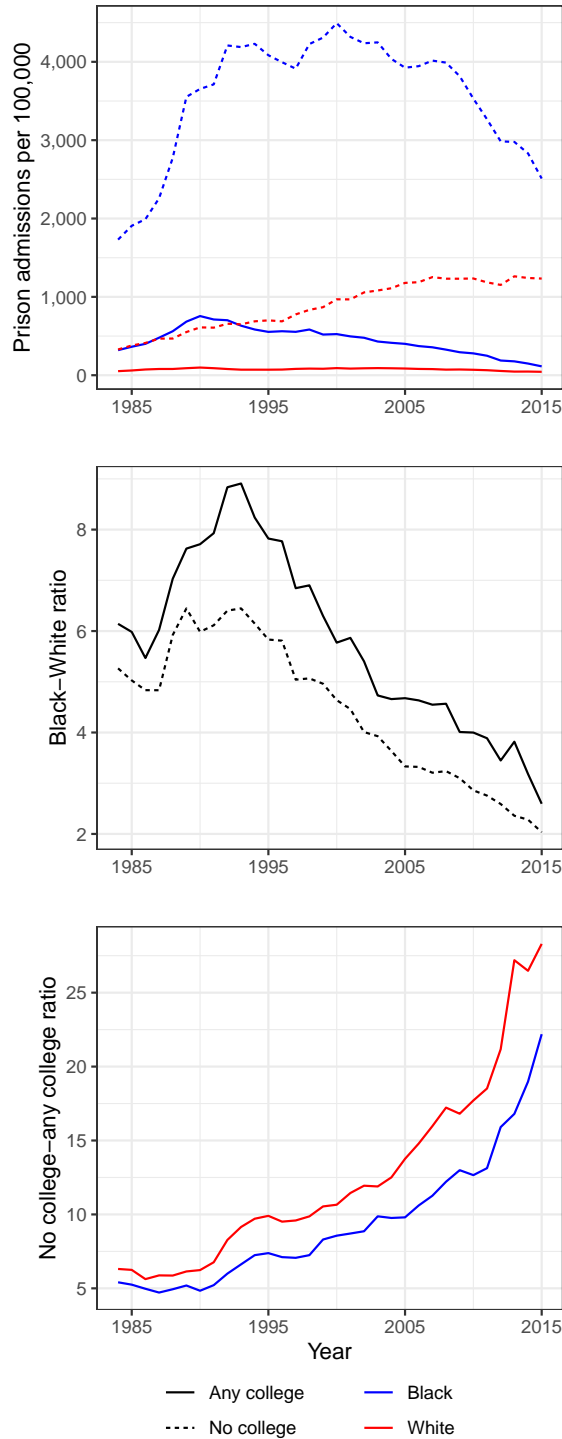
Figure 1: Changes in racial and educational inequality in prison admissions in the United States in the late-twentieth and early-twenty-first centuries. Imprisonment data come from the National Corrections Reporting Program and Bureau of Justice Statistics (2017). Rates are calculated using the Current Population Survey Merged Outgoing Rotation Groups. "Any college" refers to people who completed at least one year of college, and "no college" to those who did not. Racial groups exclude Hispanic people. The analysis is restricted to people aged 20–39. Rates are standardized to the distribution of educational attainment in 2015. See Appendix B for details about the adjustment and for unadjusted rates.
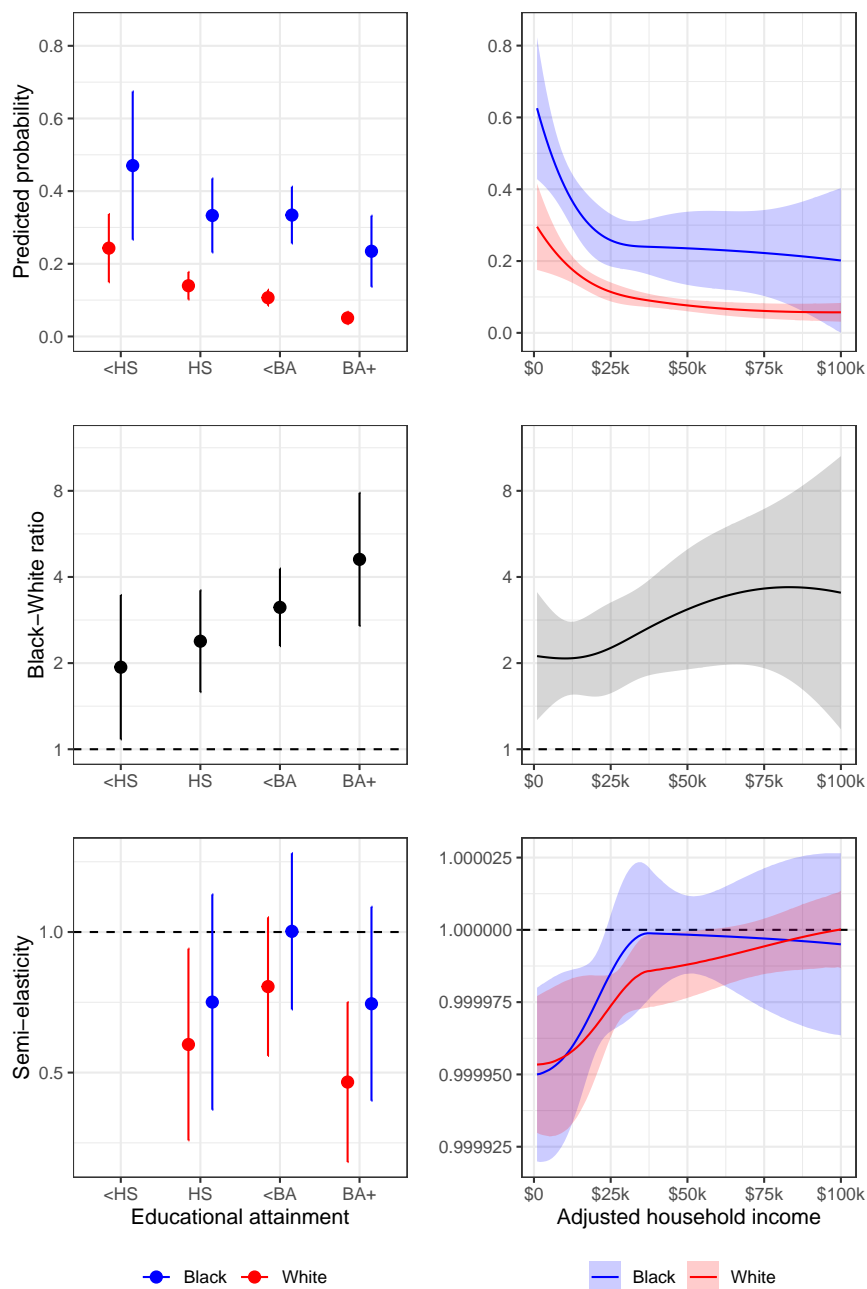
Figure 2: The probability that Black and White non-Hispanic people ever had an immediate family member imprisoned, by educational attainment and income. Imprisonment is defined as incarceration for at least one year. Data ($N = 4{,}041$) come from the Family History of Incarceration Survey (Enns et al. 2019) and are representative of the U.S. household population in 2018. Household income is adjusted to account for variation in household size. Ratios in the middle and bottom panels are displayed on a logarithmic scale for comparison. The left and right columns present estimates of separate nonparametric series regression models that measure class using data on education and income, respectively. Lines and points are estimates; bands and line ranges are 95% confidence intervals around the estimates, estimated using heteroskedasticity-consistent standard errors. The third row plots proportional changes in family-member imprisonment associated with unit changes in education or income. In ascending order, the educational attainment categories represent no high school diploma or equivalent; high school diploma or equivalent, no college; some college or associate's degree; and bachelor's degree or higher.
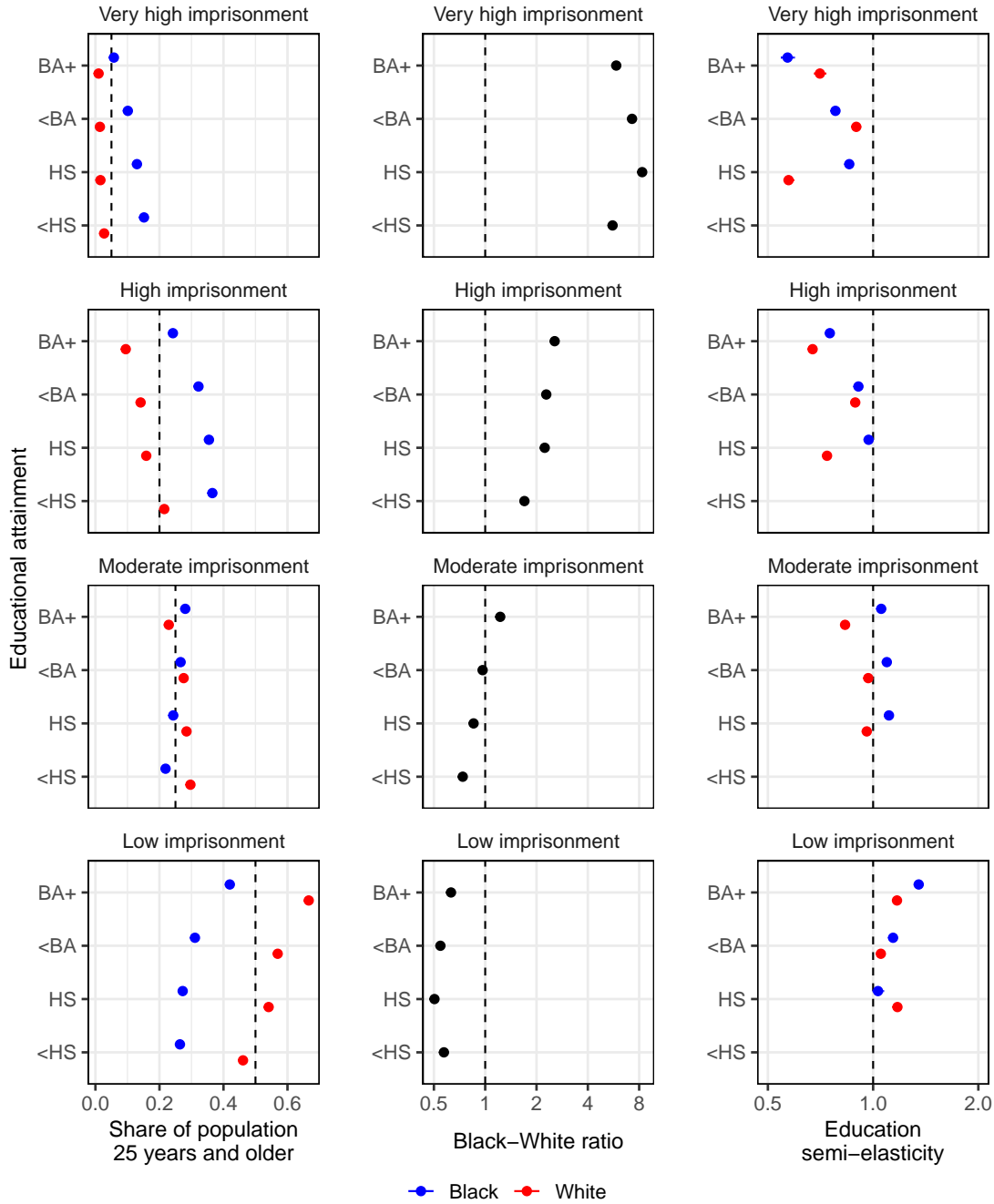
Figure 3: The share of the U.S. population 25 years and older in 2006–2010 residing in neighborhoods with different levels of imprisonment, by educational attainment and racial identification. Points are estimates and line ranges are 95% confidence intervals around the estimates; most line ranges are not visible because the confidence intervals are very small. Ratios in the middle and right panels are displayed on a logarithmic scale for comparison. Neighborhoods are measured as census tracts ($N = 37,988$). The Black racial category includes Hispanic people. Neighborhood imprisonment rates are calculated using geocoded prison admissions data from The Justice Atlas of Sentencing and Corrections (Justice Mapping Center 2010), and residence shares are calculated using 5-year 2010 American Community Survey (ACS) data (Manson et al. 2019). Measured uncertainty results from ACS sampling error. "Low" imprisonment neighborhoods are neighborhoods with imprisonment rates in the bottom 50%; "moderate," "high," and "very high" imprisonment neighborhoods are, respectively, neighborhoods falling between the 50th and 75th, 75th and 95th, and 95th and 100th percentiles.
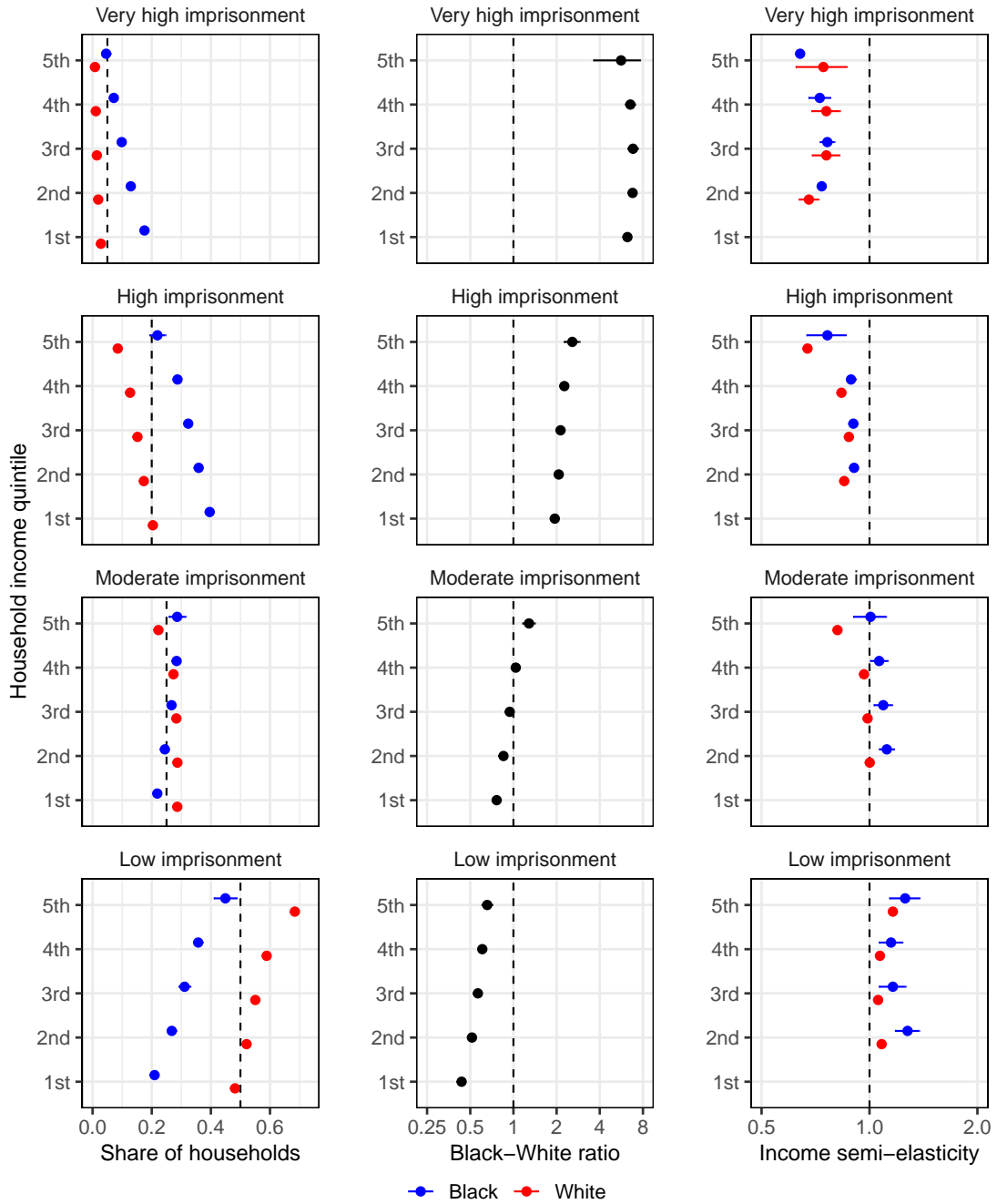
Figure 4: The share of U.S. households in 2006–2010 residing in neighborhoods with different levels of imprisonment, by household income quintile and the racial identification of householders. Points are estimates and line ranges are 95% confidence intervals around the estimates; most line ranges are not visible because the confidence intervals are very small. Household residence shares are calculated using 5-year 2010 American Community Survey data (Manson et al. 2019). See the caption of Figure 3 for additional details.

Appendix A: Restriction of age range in analysis of prison admission rates

We restrict our analysis of trends in prison admissions over the late-twentieth and early-twenty-first centuries to people aged 20–39. This makes our results comparable to those reported by Western (2006) and focuses our analysis on the ages when people are at the greatest risk of imprisonment. However, our other analyses impose no upper age restriction. To ensure that the divergence of our findings about racial and class inequality in prison admissions, neighborhood prison admissions, and family-member imprisonment is not driven by differences in the ages of the people we study, in this appendix we reproduce the results shown in Figure 1 without the upper age restriction.

As expected, Figure A1 shows that without the age restriction the prison admission rate is much lower for all groups. Racial inequality was moderately higher and class inequality was moderately lower over the period of analysis, but the trends in inequality are remarkably similar to those reported in the main analysis. Most importantly, Figure A1 shows that the primary empirical findings about prison admissions in the early twenty-first century—significant but declining racial inequality and skyrocketing class inequality—are consistent across alternative choices about which age group to examine.
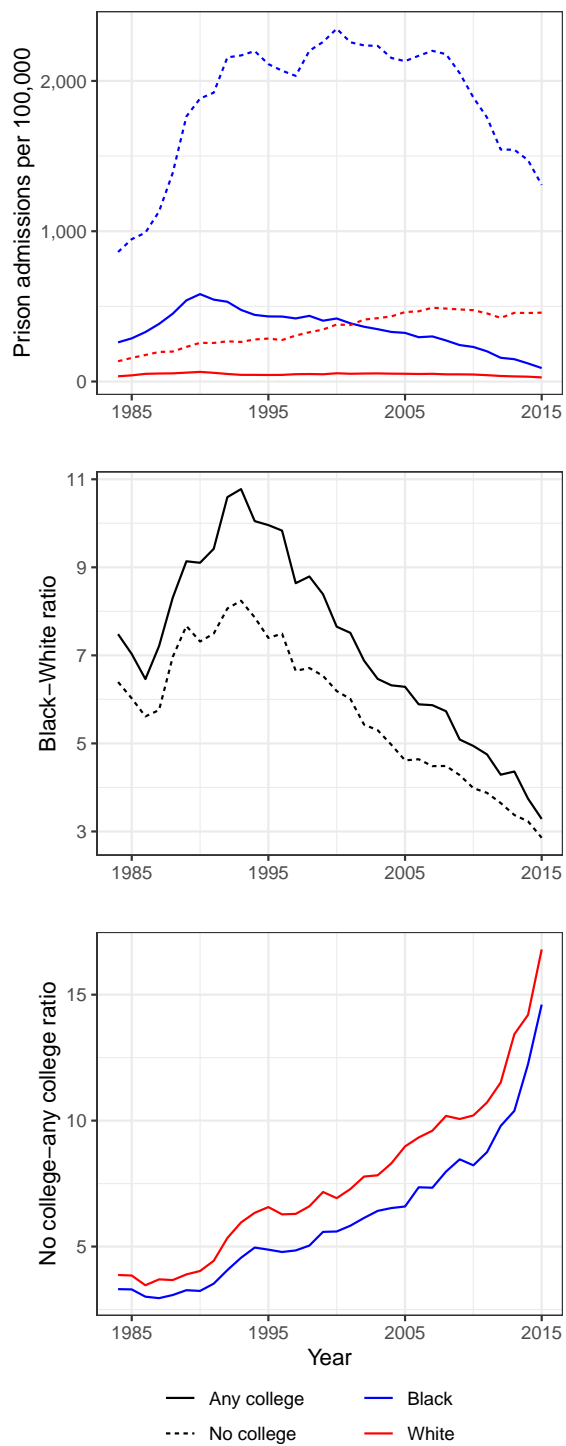
Figure A1: Changes in racial and educational inequality in prison admissions in the United States in the late-twentieth and early-twenty-first centuries, people aged 20 and older. The main results (Figure 1) include only people aged 20–39.

Appendix B: Adjustment of prison admission rates for changes in educational attainment

Our analysis of trends in prison admissions over the late-twentieth and early-twenty-first centuries adjusts for changes in the distribution of educational attainment over the period we study. This appendix describes the adjustment in greater detail and reports unadjusted results.

Between 1984 and 2015, the percentage of Black and White 20-to-39-year-olds who had not completed any years of college fell substantially—among Black people, from 65.8% to 42.0%, and among White people, from 51.5% to 29.4%. Consequently, people with no college education were increasingly concentrated at the lower end of the education distribution. This means that unadjusted education levels are not straightforwardly comparable as indicators of relative economic advantage or disadvantage over time. Even if the relationship between class and people's risk of imprisonment were stable over our period of analysis, we might still observe secular increases in the prison admission rates of people with no college education simply because these people represent increasingly marginal segments of the population.

To address this problem, we adjust the prison admission rate to hold constant the distribution of educational attainment over the period of analysis. We use 2015 as the standard year. Figure B1 illustrates our approach. First, we use detailed education data in the National Corrections Reporting Program (NCRP) and the Current Population Survey Merged Outgoing Rotation Groups (MORG) to calculate Black and White prison admission rates for three *detailed* educational groups: (i) people who did not complete four years of high school; (ii) people who completed four years of high school but did not complete any years of college; and (iii) people who completed at least one year of college. Second, we use MORG data to calculate the proportion of the total Black population and the total White population that each detailed educational group represented in each year. The colored areas in Figure B1 represent these proportions.

Third, we use the educational distribution in 2015 to calculate a standardized version of the two-level, *basic* educational groups we use in our analysis. In unadjusted analyses, shown in Figure B2, these two basic groups are (I) people who did not complete any years of college in year Y (equal to the sum of detailed groups (i) and (ii)), and (II) people who completed at least one year of college in year Y (equal to detailed group (iii)). In adjusted analyses, the standardized version of the basic educational groups are (Ia) people who would have completed no years of college in 2015 given their observed rank in the education distribution in year Y, and (IIa) people who would have completed at least one year of college in 2015 given their observed rank in the education distribution in year Y. The areas below and above the dashed lines indicate the proportion of the total population falling into each of these two standardized basic educational groups (Ia and IIa). These fixed proportions of the education distribution represent the standardized basic educational groups.

Fourth, we calculate the proportional contribution of each detailed educational group (i.e. each colored area in Figure B1) to each standardized basic educational group (i.e. each area above/below the dashed line in Figure B1). This yields a set of weights linking each detailed (three-level) educational group to each standardized basic (two-level) educational group (i.e. (i) to (Ia), (ii) to (Ia), (ii) to (IIa), and (iii) to (IIa)). Finally, we generate adjusted prison admission rates by calculating a weighted mean of the detailed group imprisonment rates. This yields prison admission rates for fixed proportions of the distribution of educational attainment.

For instance, in 2015 Black people with no college education represented 42.0% of the Black population aged 20 to 39. In 1984, the prison admission rate of Black people without four years of high school was 3,469 per 100,000 people and the prison admission rate of Black people with four years of high school but no years of college was 369 per 100,000. Among people in 1984 falling into the standardized basic no college group (the bottom 42.0% of the Black educational distribution), 49.9% had

not completed four years of high school, and 50.1% had completed four years of high school but no college. Therefore, the adjusted imprisonment rate per 100,000 of Black people with no college education in 1984 is $(3,469 \times .499) + (369 \times .501) = 1,915$.

Figure B2 plots the unadjusted prison admission rates. The figure closely mirrors the unadjusted trends for men through 2001 reported by Western (2006, p. 75). Comparing the figure to the main results (Figure 1), we see that prison admission rates for all groups are lower in the unadjusted results, except in 2015 when they are identical by construction. The maximum values of racial disparities are higher in the unadjusted results, and the trend toward decreasing racial inequality appears even more dramatic. The unadjusted results also show higher class disparities in earlier years, depicting the growth of class inequality as a steady increase over the period rather than an acceleration distinct to the twenty-first century.

However, the general conclusions that can be drawn from the unadjusted and adjusted results are highly consistent, differing primarily in the precise magnitude and timing of the observed trends. Imprisonment among White people with no college education steadily increased from 1984 to 2015. In contrast, increasing imprisonment among Black people—particularly those with no college education—reversed course. This led the Black–White gap in imprisonment to stop growing in the late-twentieth century, and to substantially decrease in the twenty-first century. Class inequality increased among both racial groups between 1984 and 2015.
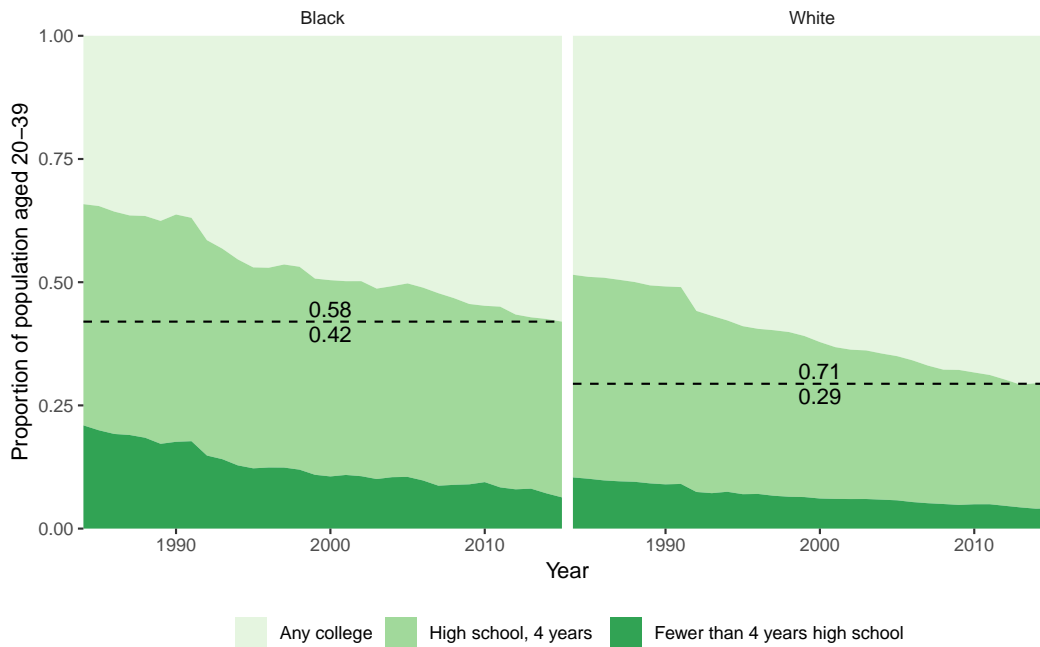
Figure B1: Change in the distribution of educational attainment, 1984–2015. Data are from the Current Population Survey Merged Outgoing Rotation Groups. The areas above and below the dashed lines represent the share of individuals aged 20–39 who in 2015 did and did not complete at least one year of college. Adjusted estimates of imprisonment rates in Figure 1 are for these fixed proportions of the racial-group-specific distributions of educational attainment, calculated as weighted averages of imprisonment rates for more detailed educational groups (colored areas).
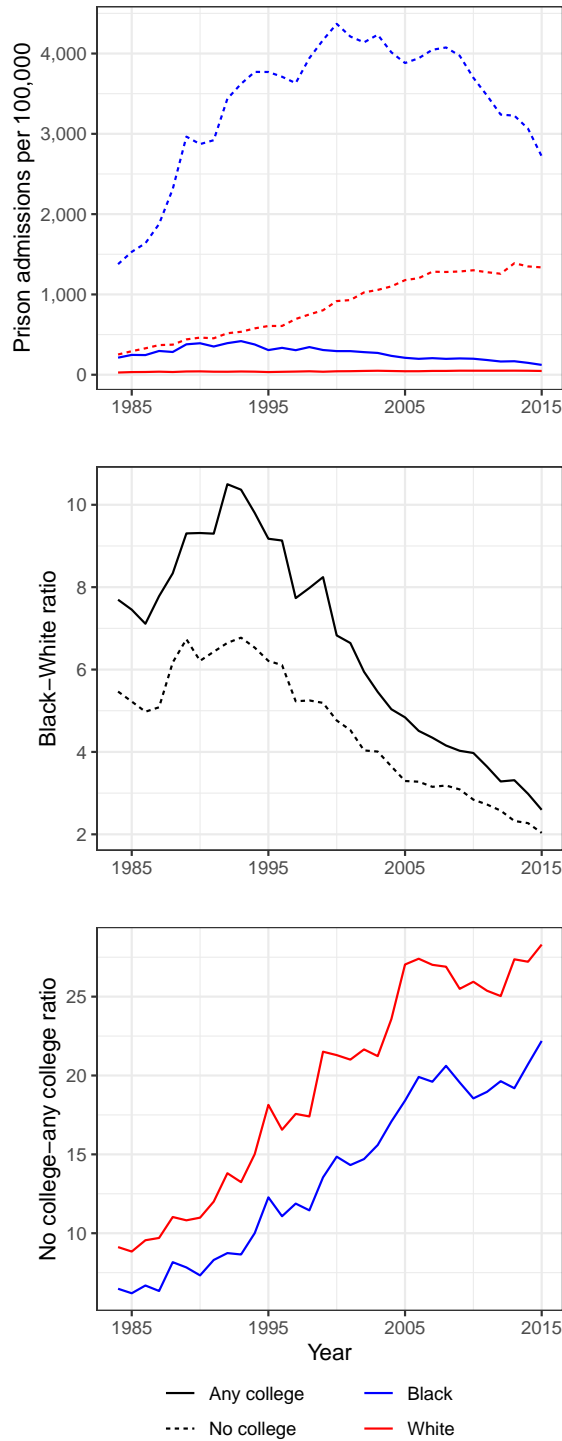
Figure B2: Unadjusted changes in racial and educational inequality in prison admissions in the United States in the late-twentieth and early-twenty-first centuries. The main results (Figure 1) standardize the distribution of educational attainment to 2015 to account for changes over time in the relative socioeconomic advantage of those who had or had not completed any years of college. Here, the rates represent unadjusted education categories.

Appendix C: Measurement of neighborhood incarceration

Our main analysis of neighborhood imprisonment uses the best available large-scale data on the geography of imprisonment—The Justice Atlas of Sentencing and Corrections (Justice Mapping Center 2010). However, these data have limitations. This appendix describes these limitations, describes a robustness check using an alternative source of incarceration data, and compares differences in the results across the two sources of data.

The first limitation of the Justice Atlas data is the mismeasurement of local imprisonment rates. The Justice Mapping Center produced census tract-level estimates of prison admissions using data provided by twenty state correctional agencies.[1] These data include at least two sources of measurement error. First, reporting agencies may have failed to report an unknown proportion of prison admissions, and administrative differences in state prison systems may have generated state-level reporting differences. Second, between 5 and 25% of admissions reported by each agency had residential address information that was either missing or could not be geocoded. Failed geocodes lead to undercounts of total prison admissions. If admissions are undercounted nonrandomly, our estimates may be biased.

The second limitation of the Justice Atlas data is that it is based on a nationally unrepresentative sample of twenty states. The data include estimates for the majority of U.S. neighborhoods—37,988 (51.2%) of 74,134 census tracts—but the observed

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[1]Agencies providing prison admissions data were: the Alaska Department of Corrections; the Arkansas Department of Correction; the Florida Department of Corrections; the Georgia Department of Corrections; the Indiana Department of Correction; the Iowa Department of Corrections; the Kansas Department of Corrections; the Kentucky Department of Corrections; the Louisiana Department of Public Safety and Corrections; the Michigan Department of Corrections; the Mississippi Department of Corrections; the Nebraska Department of Correctional Services; the New York State Division of Criminal Justice Services; the North Carolina Department of Correction; the Ohio Department of Rehabilitation and Correction; the Oklahoma Department of Corrections; the Oregon Department of Corrections; the Pennsylvania Department of Corrections; the State of Rhode Island Department of Corrections; the South Carolina Department of Corrections; the Texas Department of Criminal Justice; and the West Virginia Division of Corrections.

tracts are disproportionately located in the South and outside of the West. If racial and class inequality in neighborhood imprisonment in these states is non-representative, our results may not be generalizable to other neighborhoods.

To check the robustness of our main analysis, we use data from the Opportunity Atlas (Chetty et al. 2018). The Opportunity Atlas is based on a 20.5 million-person sample of linked Census and federal income tax records representing 96.2 percent of U.S. citizens and authorized immigrants born between 1978 and 1983. It calculates tract-level estimates of incarceration by first observing which sampled people were incarcerated on April 1, 2010, then assigning these people to census tracts in proportion to the duration of their observed residence in each tract before age 23. Here, incarceration is defined as residing in a federal detention center, federal prison, state prison, local jail, residential correctional facility, military jail, or juvenile correctional facility. The resulting estimates thus represent the incarceration rate in 2010 of people aged 27–35 who grew up in a given census tract.

The Opportunity Atlas reports incarceration rates separately for different racial and ethnic groups. We use a weighted sum to calculate total incarceration rates for 71,714 (96.9 percent) of the 74,134 census tracts in the U.S in 2010. As in the main analysis, we then divide tracts into four types based on the distribution of neighborhood incarceration. We use methods identical to those in the main analysis to link American Community Survey data to neighborhoods, and to calculate the proportion of each racial–class group residing in each neighborhood type.

Like the Justice Atlas data, the Opportunity Atlas data have both advantages and disadvantages. Because they are based on tax and census records, they are uniquely reliable and complete. This makes them well-suited to evaluate the most important limitations of the Justice Atlas data. But the way neighborhood incarceration is measured in the Opportunity Atlas also departs significantly from a straightforward conception of neighborhood imprisonment. First, the measure includes people who

were imprisoned and people who were jailed. Second, it is a point-in-time measure of the stock of people admitted to prison or jail rather than a flow measuring the annual prison admission rate. Third, the measure of neighborhood incarceration is not identical to the incarceration rate of current neighborhood residents. Because the Opportunity Atlas geolocates incarcerated people as a weighted average of their childhood residence, migration over time will cause our estimates to diverge from imprisonment rates based on a person's neighborhood of arrest or neighborhood residence at the time of their arrest. For instance, gentrification may result in high-income families moving into neighborhoods whose previous childhood residents are more likely to be incarcerated than current adult residents. Although prior research suggests that neighborhood-level incarceration rates tend to be strongly correlated over time (Sampson and Loeffler 2010, p. 24), these differences should be considered when evaluating discrepancies between our results based on the two sources.

The correlation coefficient for neighborhood imprisonment as measured in the Justice Atlas and neighborhood incarceration as measured in the Opportunity Atlas is .555. Column (1) of Tables B1–6 reproduces the main results from Figures 3 and 4. Column (2) presents estimates using Opportunity Atlas data for the same sample of 37,988 census tracts for which Justice Atlas data are available. Column (3) extends the robustness check to the full 71,714 census tracts for which Opportunity Atlas data are available. The ratio of Columns (2) and (1) gives a sense of the proportional difference in the results following from discrepancies in the measures, and the ratio of Columns (3) and (2) gives a sense of the proportional difference following from divergent samples.

Class inequality in neighborhood incarceration is remarkably similar in the Justice Atlas and Opportunity Atlas data. Our results using the Opportunity Atlas data, in contrast, reveal greater racial inequality in households' residential exposure to neighborhood incarceration. A much greater proportion of this discrepancy derives

from differences in measurement than from sampling. Ultimately, it is not possible to determine whether differences in the estimates based on the same sample ((2)/(1)) are caused by bias in the Justice Atlas data or by differences in the constructs measured by the two sources. However, as we document, racial inequality in prison admission rates have decreased over the last two decades. Because the Opportunity Atlas's point-in-time measure of incarcerated people incorporates the cumulative history of prison admissions, it is unsurprising that this measure indicates greater racial inequality in neighborhood incarceration.

Comparing Columns (3) and (2) of Tables C2 and C5 gives suggestive evidence that any sampling bias resulting from the Justice Atlas data leads us to understate racial inequality in neighborhood imprisonment. Because our principal conclusion is that racial inequality in neighborhood incarceration exceeds class inequality, this robustness check suggests that our claims are conservative. As Tables C1 and C4 show, analyses using both sources show that compared to White people with the least education and income, Black people with the most education and income were, respectively, more likely to live in high- and very high-incarceration neighborhoods and less likely to live in low-incarceration neighborhoods.

Level	Education	Racial group	(1)	(2)	(3)	(2)/(1)	(3)/(2)	(3)/(1)
Very high	BA+	Black	0.058	0.086	0.083	1.486	0.965	1.434
Very high	BA+	White	0.010	0.012	0.009	1.184	0.798	0.946
Very high	<BA	Black	0.101	0.139	0.135	1.369	0.976	1.336
Very high	<BA	White	0.014	0.013	0.010	0.934	0.784	0.732
Very high	HS	Black	0.130	0.180	0.180	1.389	1.001	1.390
Very high	HS	White	0.016	0.015	0.012	0.955	0.822	0.786
Very high	<HS	Black	0.152	0.208	0.216	1.370	1.042	1.427
Very high	<HS	White	0.027	0.024	0.021	0.902	0.850	0.766
High	BA+	Black	0.242	0.362	0.336	1.495	0.929	1.388
High	BA+	White	0.095	0.118	0.095	1.241	0.806	1.000
High	<BA	Black	0.322	0.430	0.407	1.336	0.947	1.265
High	<BA	White	0.141	0.161	0.134	1.143	0.829	0.948
High	HS	Black	0.355	0.454	0.440	1.280	0.968	1.240
High	HS	White	0.159	0.178	0.154	1.121	0.868	0.973
High	<HS	Black	0.365	0.457	0.439	1.252	0.960	1.202
High	<HS	White	0.215	0.228	0.203	1.061	0.889	0.943
Moderate	BA+	Black	0.281	0.266	0.261	0.947	0.980	0.929
Moderate	BA+	White	0.229	0.229	0.202	1.001	0.881	0.882
Moderate	<BA	Black	0.266	0.244	0.245	0.917	1.004	0.921
Moderate	<BA	White	0.276	0.285	0.263	1.033	0.923	0.954
Moderate	HS	Black	0.243	0.223	0.221	0.916	0.992	0.908
Moderate	HS	White	0.285	0.294	0.278	1.034	0.944	0.976
Moderate	<HS	Black	0.219	0.207	0.204	0.945	0.986	0.931
Moderate	<HS	White	0.297	0.307	0.299	1.035	0.973	1.008
Low	BA+	Black	0.420	0.287	0.321	0.683	1.119	0.765
Low	BA+	White	0.666	0.641	0.694	0.963	1.082	1.041
Low	<BA	Black	0.311	0.188	0.212	0.603	1.133	0.684
Low	<BA	White	0.569	0.541	0.593	0.950	1.097	1.042
Low	HS	Black	0.273	0.143	0.159	0.525	1.113	0.584
Low	HS	White	0.541	0.513	0.556	0.948	1.083	1.027
Low	<HS	Black	0.264	0.128	0.140	0.485	1.097	0.532
Low	<HS	White	0.461	0.440	0.477	0.955	1.085	1.035

Table C1: Alternative specifications of neighborhood residence of the U.S. population 25 years and older. "Level" indicates the level of neighborhood imprisonment or incarceration, depending on the data source. Column (1) contains the main results, plotted in the left panel of Figure 3. These are estimated shares of each educational–racial group residing in neighborhoods of each level of imprisonment or incarceration. Column (2) modifies the main results by calculating neighborhood incarceration using point-in-time measures of incarceration (Chetty et al. 2018) rather than measures of prison admissions (Justice Mapping Center 2010). Prison admissions data are only available for 37,988 census tracts (51.3%). Column (3) modifies Column (2) by expanding the analysis to 71,714 census tracts (96.9%).

Level	Education	(1)	(2)	(3)	(2)/(1)	(3)/(2)	(3)/(1)
Very high	BA+	5.871	7.367	8.906	1.255	1.209	1.517
Very high	<BA	7.266	10.655	13.256	1.467	1.244	1.825
Very high	HS	8.333	12.119	14.745	1.454	1.217	1.769
Very high	<HS	5.587	8.484	10.402	1.519	1.226	1.862
High	BA+	2.555	3.076	3.546	1.204	1.153	1.388
High	<BA	2.281	2.665	3.047	1.168	1.143	1.335
High	HS	2.234	2.553	2.847	1.143	1.115	1.275
High	<HS	1.698	2.004	2.165	1.180	1.080	1.275
Moderate	BA+	1.225	1.159	1.289	0.946	1.112	1.053
Moderate	<BA	0.965	0.857	0.932	0.888	1.087	0.966
Moderate	HS	0.854	0.756	0.795	0.885	1.051	0.930
Moderate	<HS	0.738	0.673	0.682	0.912	1.013	0.924
Low	BA+	0.630	0.447	0.463	0.710	1.034	0.734
Low	<BA	0.546	0.347	0.358	0.635	1.033	0.656
Low	HS	0.504	0.279	0.287	0.554	1.027	0.569
Low	<HS	0.573	0.291	0.294	0.508	1.011	0.514

Table C2: Alternative specifications of neighborhood residence of the U.S. population 25 years and older. Column (1) contains the main results, plotted in the middle panel of Figure 3. These are estimated Black–White ratios, for each educational group, of residence by level of neighborhood imprisonment or incarceration. See the caption of Table C1 for details.

Level	Education	Racial group	(1)	(2)	(3)	(2)/(1)	(3)/(2)	(3)/(1)
Very high	BA+	Black	0.569	0.618	0.611	1.085	0.989	1.073
Very high	BA+	White	0.704	0.893	0.909	1.268	1.018	1.291
Very high	<BA	Black	0.780	0.769	0.750	0.986	0.975	0.961
Very high	<BA	White	0.895	0.875	0.834	0.977	0.954	0.932
Very high	HS	Black	0.855	0.867	0.833	1.014	0.961	0.975
Very high	HS	White	0.573	0.607	0.588	1.059	0.968	1.025
Very high	<HS	Black	NA	NA	NA	NA	NA	NA
Very high	<HS	White	NA	NA	NA	NA	NA	NA
High	BA+	Black	0.752	0.841	0.825	1.119	0.980	1.097
High	BA+	White	0.671	0.729	0.708	1.086	0.972	1.056
High	<BA	Black	0.908	0.947	0.927	1.043	0.978	1.021
High	<BA	White	0.889	0.907	0.866	1.020	0.955	0.974
High	HS	Black	0.971	0.993	1.001	1.023	1.008	1.031
High	HS	White	0.738	0.779	0.761	1.056	0.977	1.031
High	<HS	Black	NA	NA	NA	NA	NA	NA
High	<HS	White	NA	NA	NA	NA	NA	NA
Moderate	BA+	Black	1.055	1.090	1.064	1.033	0.976	1.009
Moderate	BA+	White	0.831	0.806	0.769	0.969	0.954	0.925
Moderate	<BA	Black	1.094	1.096	1.110	1.002	1.012	1.014
Moderate	<BA	White	0.969	0.967	0.946	0.998	0.978	0.977
Moderate	HS	Black	1.110	1.076	1.082	0.969	1.006	0.975
Moderate	HS	White	0.959	0.958	0.929	0.999	0.970	0.969
Moderate	<HS	Black	NA	NA	NA	NA	NA	NA
Moderate	<HS	White	NA	NA	NA	NA	NA	NA
Low	BA+	Black	1.350	1.530	1.510	1.133	0.987	1.119
Low	BA+	White	1.170	1.186	1.170	1.013	0.986	0.999
Low	<BA	Black	1.140	1.309	1.334	1.148	1.019	1.169
Low	<BA	White	1.052	1.055	1.068	1.003	1.012	1.015
Low	HS	Black	1.033	1.118	1.134	1.083	1.014	1.098
Low	HS	White	1.174	1.165	1.164	0.993	0.999	0.991
Low	<HS	Black	NA	NA	NA	NA	NA	NA
Low	<HS	White	NA	NA	NA	NA	NA	NA

Table C3: Alternative specifications of neighborhood residence of the U.S. population 25 years and older. Column (1) contains the main results, plotted in the right panel of Figure 3. These are estimated ratios of residence by level of neighborhood imprisonment or incarceration, comparing, separately for Black people and White non-Hispanic people, each educational group to the next lowest educational group. See the caption of Table C1 for details.

Level	Income	Racial group	(1)	(2)	(3)	(2)/(1)	(3)/(2)	(3)/(1)
Very high	5th	Black	0.046	0.068	0.064	1.490	0.943	1.405
Very high	5th	White	0.008	0.007	0.006	0.868	0.793	0.688
Very high	4th	Black	0.072	0.105	0.105	1.468	0.995	1.460
Very high	4th	White	0.011	0.010	0.009	0.957	0.825	0.790
Very high	3rd	Black	0.099	0.138	0.138	1.400	1.003	1.404
Very high	3rd	White	0.014	0.015	0.012	1.012	0.839	0.849
Very high	2nd	Black	0.129	0.177	0.180	1.370	1.019	1.396
Very high	2nd	White	0.019	0.019	0.016	1.010	0.839	0.848
Very high	1st	Black	0.176	0.234	0.238	1.331	1.018	1.355
Very high	1st	White	0.028	0.030	0.025	1.050	0.836	0.877
High	5th	Black	0.219	0.336	0.309	1.531	0.921	1.410
High	5th	White	0.085	0.101	0.079	1.186	0.782	0.928
High	4th	Black	0.287	0.406	0.390	1.413	0.962	1.359
High	4th	White	0.127	0.147	0.124	1.157	0.843	0.975
High	3rd	Black	0.323	0.441	0.425	1.365	0.962	1.313
High	3rd	White	0.152	0.175	0.152	1.153	0.866	0.999
High	2nd	Black	0.359	0.458	0.444	1.278	0.969	1.238
High	2nd	White	0.173	0.197	0.173	1.136	0.877	0.995
High	1st	Black	0.396	0.462	0.447	1.167	0.968	1.129
High	1st	White	0.204	0.223	0.197	1.093	0.883	0.966
Moderate	5th	Black	0.286	0.272	0.270	0.950	0.994	0.944
Moderate	5th	White	0.223	0.227	0.195	1.018	0.862	0.877
Moderate	4th	Black	0.284	0.268	0.262	0.943	0.979	0.923
Moderate	4th	White	0.274	0.278	0.256	1.016	0.922	0.937
Moderate	3rd	Black	0.267	0.243	0.242	0.911	0.996	0.908
Moderate	3rd	White	0.283	0.291	0.275	1.027	0.944	0.970
Moderate	2nd	Black	0.244	0.224	0.222	0.917	0.989	0.907
Moderate	2nd	White	0.287	0.295	0.282	1.028	0.956	0.983
Moderate	1st	Black	0.219	0.190	0.191	0.870	1.003	0.872
Moderate	1st	White	0.286	0.291	0.282	1.017	0.968	0.985
Low	5th	Black	0.449	0.325	0.357	0.723	1.099	0.794
Low	5th	White	0.684	0.665	0.720	0.973	1.082	1.053
Low	4th	Black	0.357	0.221	0.243	0.619	1.099	0.680
Low	4th	White	0.589	0.565	0.611	0.960	1.082	1.038
Low	3rd	Black	0.311	0.177	0.195	0.570	1.098	0.626
Low	3rd	White	0.550	0.519	0.561	0.943	1.081	1.020
Low	2nd	Black	0.268	0.141	0.154	0.526	1.095	0.576
Low	2nd	White	0.521	0.489	0.529	0.939	1.082	1.017
Low	1st	Black	0.210	0.114	0.124	0.543	1.088	0.591
Low	1st	White	0.482	0.456	0.496	0.947	1.088	1.031

Table C4: Alternative specifications of neighborhood residence of U.S. households. "Level" indicates the level of neighborhood imprisonment or incarceration, depending on the data source; "Racial group" indicates the identification of at least one household member; "Income" indicates the household's income quintile. Column (1) contains the main results, plotted in the left panel of Figure 4. These are estimated shares of each income–racial group residing in neighborhoods of each level of imprisonment or incarceration. Column (2) modifies the main results by calculating neighborhood incarceration using point-in-time measures of incarceration (Chetty et al. 2018) rather than measures of prison admissions (Justice Mapping Center 2010). Prison admissions data are only available for 37,988 census tracts (51.3%). Column (3) modifies Column (2) by expanding the analysis to 71,714 census tracts (96.9%).

Level	Income	(1)	(2)	(3)	(2)/(1)	(3)/(2)	(3)/(1)
Very high	5th	5.632	9.664	11.494	1.716	1.189	2.041
Very high	4th	6.539	10.033	12.091	1.534	1.205	1.849
Very high	3rd	6.820	9.431	11.285	1.383	1.197	1.655
Very high	2nd	6.776	9.185	11.156	1.356	1.215	1.646
Very high	1st	6.240	7.914	9.639	1.268	1.218	1.545
High	5th	2.574	3.322	3.911	1.291	1.177	1.520
High	4th	2.264	2.767	3.157	1.222	1.141	1.394
High	3rd	2.130	2.522	2.800	1.184	1.111	1.315
High	2nd	2.070	2.329	2.573	1.125	1.105	1.243
High	1st	1.943	2.073	2.272	1.067	1.096	1.170
Moderate	5th	1.284	1.198	1.382	0.933	1.153	1.076
Moderate	4th	1.039	0.964	1.023	0.928	1.061	0.985
Moderate	3rd	0.942	0.836	0.882	0.887	1.055	0.936
Moderate	2nd	0.852	0.760	0.786	0.892	1.034	0.923
Moderate	1st	0.764	0.653	0.677	0.855	1.036	0.886
Low	5th	0.656	0.488	0.495	0.743	1.015	0.754
Low	4th	0.607	0.392	0.397	0.645	1.015	0.655
Low	3rd	0.565	0.342	0.347	0.604	1.015	0.614
Low	2nd	0.514	0.288	0.291	0.560	1.012	0.566
Low	1st	0.435	0.250	0.250	0.574	1.000	0.574

Table C5: Alternative specifications of racial inequality in the neighborhood residence of U.S. households. Column (1) contains the main results, plotted in the middle panel of Figure 4. These are estimated Black–White ratios, for each income quintile, of household residence by level of neighborhood imprisonment or incarceration. See the caption of Table C4 for details.

Level	Income	Racial group	(1)	(2)	(3)	(2)/(1)	(3)/(2)	(3)/(1)
Very high	5th	Black	0.640	0.650	0.616	1.015	0.948	0.962
Very high	5th	White	0.744	0.675	0.648	0.908	0.960	0.871
Very high	4th	Black	0.727	0.762	0.756	1.049	0.991	1.040
Very high	4th	White	0.758	0.717	0.705	0.946	0.984	0.931
Very high	3rd	Black	0.763	0.780	0.767	1.022	0.984	1.006
Very high	3rd	White	0.758	0.759	0.759	1.002	0.999	1.001
Very high	2nd	Black	0.736	0.757	0.758	1.029	1.001	1.030
Very high	2nd	White	0.678	0.652	0.655	0.962	1.004	0.967
Very high	1st	Black	NA	NA	NA	NA	NA	NA
Very high	1st	White	NA	NA	NA	NA	NA	NA
High	5th	Black	0.763	0.827	0.792	1.083	0.958	1.038
High	5th	White	0.671	0.689	0.639	1.026	0.928	0.952
High	4th	Black	0.888	0.919	0.919	1.035	1.000	1.035
High	4th	White	0.835	0.838	0.815	1.003	0.973	0.976
High	3rd	Black	0.902	0.963	0.956	1.068	0.993	1.061
High	3rd	White	0.876	0.890	0.879	1.015	0.988	1.003
High	2nd	Black	0.906	0.992	0.993	1.095	1.001	1.096
High	2nd	White	0.850	0.883	0.876	1.039	0.993	1.031
High	1st	Black	NA	NA	NA	NA	NA	NA
High	1st	White	NA	NA	NA	NA	NA	NA
Moderate	5th	Black	1.007	1.014	1.029	1.007	1.015	1.022
Moderate	5th	White	0.814	0.815	0.761	1.001	0.934	0.935
Moderate	4th	Black	1.064	1.101	1.082	1.035	0.983	1.017
Moderate	4th	White	0.965	0.955	0.933	0.989	0.977	0.967
Moderate	3rd	Black	1.092	1.086	1.094	0.994	1.007	1.001
Moderate	3rd	White	0.988	0.988	0.975	1.000	0.987	0.987
Moderate	2nd	Black	1.117	1.177	1.161	1.053	0.986	1.039
Moderate	2nd	White	1.002	1.012	1.000	1.010	0.988	0.998
Moderate	1st	Black	NA	NA	NA	NA	NA	NA
Moderate	1st	White	NA	NA	NA	NA	NA	NA
Low	5th	Black	1.257	1.468	1.468	1.167	1.000	1.168
Low	5th	White	1.162	1.178	1.178	1.014	1.000	1.014
Low	4th	Black	1.148	1.247	1.248	1.086	1.001	1.087
Low	4th	White	1.070	1.088	1.089	1.017	1.001	1.018
Low	3rd	Black	1.162	1.260	1.263	1.085	1.002	1.087
Low	3rd	White	1.057	1.061	1.060	1.004	0.999	1.003
Low	2nd	Black	1.277	1.235	1.243	0.967	1.007	0.974
Low	2nd	White	1.081	1.072	1.066	0.992	0.995	0.986
Low	1st	Black	NA	NA	NA	NA	NA	NA
Low	1st	White	NA	NA	NA	NA	NA	NA

Table C6: Alternative specifications of class inequality in the neighborhood residence of U.S. households. Column (1) contains the main results, plotted in the right panel of Figure 4. These are estimated ratios of household residence by level of neighborhood imprisonment or incarceration, comparing, separately for Black people and White non-Hispanic people, each income quintile to the next lowest income quintile. See the caption of Table C4 for details.