

# Racial Inequality in the Transition to Adulthood After Prison



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*That formerly incarcerated black men experience poor life-course outcomes relative to other subpopulations is well established, yet our ongoing research indicates substantial racial inequality in outcomes among the formerly incarcerated. Young, black former prisoners lag behind their white counterparts in achieving traditional adulthood markers: education, employment, and residential independence. We examine explanations for these inequalities using longitudinal administrative data on a cohort of male parolees age eighteen to twenty-five. We find that early postprison experiences and social context explain some variation. Considerable racial inequality persists, however, even as we control for pre- and postprison life-course conditions, criminal justice contact, and social context. We discuss this in relation to estimates of discrimination, stigma, and social networks not observable in our data.*

**Keywords:** racial inequality, transition to adulthood, incarceration, group-based multitrajectory models

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The number of individuals incarcerated in prisons and jails in the United States has risen dramatically over the last four decades, an increase accompanied by a more general escalation in the number of young Americans who experience formal contact with the criminal justice system. Approximately one-third of young adults can now expect to be arrested by the time they turn twenty-three (Brame et al. 2012). For many of these young people, criminal justice contact continues after arrest: the number of individuals on parole and probation increased dramatically. One in thirty-one American adults is on probation, on parole, or in prison or jail on any given day (Pew Center on the States 2009). Because about 80 percent of prisoners are released under parole supervision, the effects of prison are tightly linked to the experiences and institutions of community supervision (National Research Council 2007).

Increases in contact with the criminal justice system have been linked to increasing racial inequality in access to the opportunities that facilitate successful life-course development. Arrest, incarceration, and community supervision are experienced disproportionately by young, low skill, African American males (Bonczar 2003), whose criminal records further marginalize them socially, educationally, and economically by restricting their access to education, housing, and employment (Visher and Travis 2003). That formerly incarcerated black men experience poor life course outcomes relative to other subpopulations is well established (Western 2006). Yet our ongoing research indicates substantial racial inequality in life-course outcomes even among former male prisoners.

We study young men who are released from prison during the transition to adulthood, a critical developmental period in which key life transitions are typically made and life trajectories often established (Hogan and Astone 1986). Young, male, black former prisoners lag behind their white counterparts in achieving traditional markers of adulthood: completing education, finding employment, and establishing their own households. That they do suggests that we have yet to understand the full complexity of the entanglements between criminal justice contact and racial inequality in access

to opportunities and successful life-course development. This article presents evidence of racial inequality in postprison trajectories to adulthood, develops possible explanations for that inequality, and tests whether the explanations account for racial inequality in postprison transitions to adulthood.

The largest racial difference after release from prison is between those who maintain criminal justice contact without meeting traditional markers of adulthood and those who avoid criminal justice contact and meet most traditional adulthood markers. Blacks are more likely to experience the former pathway, whites the latter. The life-course theoretical framework and research on the consequences of criminal justice contact contribute to possible explanations for these racial inequalities.

On entering prison, whites are more advantaged than blacks in terms of their life-course development, in particular, the progress they have made transitioning to adulthood. However, they exhibit more substance abuse and mental health problems, which can impede those transitions and contribute to criminal justice contact. In general, the evidence suggests that young black men are disproportionately subject to criminal justice contact. Racial inequality in criminal justice system contact before prison may have cumulative effects on life-course outcomes that disproportionately affect black former prisoners (Sampson and Laub 1997).

After prison, young black men are far more likely than their white counterparts to return to disadvantaged social contexts—such as neighborhoods and counties—that provide fewer resources for life-course development (Wilson 1987; Krivo and Peterson 1996). In these contexts, the processes that contributed to their pre-prison transitions to adulthood resume and set the stage for later outcomes, a form of postprison path dependence. To the extent that employment and education are inhibited and criminal justice contact and substance use are facilitated, disadvantaged social environments disproportionately set young black former prisoner onto adulthood transitions that negatively affect their long-term life-course trajectories.

We examine whether the explanations we

developed account for racial inequality in post-prison transitions in a sample of young men released from prison during the transition to adulthood. We include measures that capture pre- and postprison formal contact with the criminal justice system, pre- and postprison life-course development, within prison experiences, and the postprison neighborhood and county context. Yet these measures fail to completely explain the racial inequality in outcomes. We discuss other potential explanations for the residual inequality we are not able to test with our data but that have been discussed extensively in the literature, including racial discrimination, the stigma of a criminal record, and social network support.

### THE LIFE-COURSE FRAMEWORK AND THE TRANSITION TO ADULTHOOD

To develop specific hypotheses, we draw on the life course and transition to adulthood frameworks and research on racial inequality in contact with the criminal justice system. The life-course framework is a developmentally informed theoretical perspective that emphasizes the connections between life-course stages (Sampson and Laub 1992). A central assumption is that life events (such as marriage, employment, and school completion) are linked over time, directing attention to the sequences and patterns of events that unfold (Elder 1988).

Trajectories and transitions are the two primary concepts that link individual experiences over the life course and structure life outcomes (Sampson and Laub 1992, 1993). Trajectories are long-term patterns or sequences of behaviors and social roles. Transitions are discrete changes in roles and behaviors connected to “salient life events” such as marriage, school completion, entry into military service, or, for our study population, various contacts with the criminal justice system (Elder 1988; Pettit and Western 2004). For instance, in a common pathway parents provide material support while children accrue human capital through education, which enables the transition to work and the eventual establishment of an independent household.

The transition to adulthood is a developmental period during which important role

transitions are made and long-term life trajectories are established. Dennis Hogan and Nan Astone stress that the transition to adulthood is a process, rather than a discrete event, which involves the assumption of progressively more adult social roles across multiple life-course domains (1986). Current conceptualizations of that process emphasize nonuniformity in the achievement of markers of stability and independence in the domains of education, employment, and housing (Waters et al. 2011; Schoon 2015). For example, as the transition to adulthood period has lengthened, events such as high school completion, college enrollment, stable employment, marriage, and childbearing are no longer assumed to follow each other successively or immediately: multiple trajectories to adulthood that include diverse event orderings have been identified (Furstenburg 2006). Marriage may follow childbearing, or not occur at all, or postsecondary schooling may follow stable labor market involvement and occur later in life. Children may leave and then return to the parental home multiple times.

The life-course framework highlights the importance of life events that occur during the transition to adulthood in creating and maintaining inequality in the kinds of opportunities available to people during transitional processes and their life-course outcomes. Life events may either hasten or interrupt role transitions, which in turn establish life-course trajectories and can lead to what Glen Elder calls the “accumulation of disadvantage” (Furstenburg 2006; Kerckhoff 1993; Elder 1988). As a result, racial and other inequalities in adult outcomes often originate during the transition to adulthood. However, the life-course framework also suggests that transitions and their effects are reversible and trajectories can be shifted (Laub and Sampson 2001). This leads researchers to focus also on resilience or “how some individuals succeed in the face of difficult circumstances” (Osgood et al. 2006). The transition to adulthood has often been characterized as an era of “opportunity” and “possibility” during which emerging adults have the ability to “transform their lives,” yet many young adults leave prison only to return again or struggle to transition to adulthood and achieve

economic and residential independence (Arnett 2005).

### **RACIAL INEQUALITY IN THE TRANSITION TO ADULTHOOD AFTER PRISON**

In discussing possible explanations for racial inequality in transition to adulthood outcomes that include desistance, employment, living independently, and college enrollment, we begin with explanations based on inequality in pre-prison experiences: criminal justice contact, human capital accumulation, household formation, and family transitions (which we collectively refer to as “adulthood transitions”), and substance abuse and mental health. We then turn to prison and postprison experiences, including racially unequal social contexts and path dependence.

#### **Pre-Prison Criminal Justice System Contact**

Racial inequality in the onset and frequency of ongoing criminal justice contact may help account for inequality in postprison outcomes. Considerable evidence suggests that racial inequality in criminal justice system contact originates at arrest and compounds through incarceration. Forty-nine percent of black males but only 38 percent of their white counterparts experience an arrest by age twenty-three (Harris et al. 2009; Brame et al. 2014). The racial inequality at arrest seems to widen through the stages of criminal justice system processing, about 20 percent of black males but only 3 percent of white males being incarcerated in young adulthood (Bonczar 2003; Pettit and Western 2004).

How prior contact with the criminal justice system cumulatively contributes to inequality in postprison life-course outcomes is largely unknown because most studies of racial inequality in the criminal justice system focus on a single point of criminal justice contact, such as sentencing or incarceration (see, for example, Zatz 2000; Raphael 2007). Earlier and more frequent arrests result in longer criminal records, which can lead to harsher sentences, more stringent treatment in prison, and more intense supervision after release (Bushway and Piehl 2007; Frase 2009; Petersilia and Turner 1993). More frequent arrests, convictions, and

punishments during adolescence and early adulthood can interrupt schooling and the accumulation of work experience, delaying post-prison adult transitions as the justice-involved try to rebuild their lives on weak human capital foundations (Bernberg and Krohn 2003). Substance use that begins with experimentation can morph into abuse as individuals find themselves with few licit opportunities and instead turn to illicit work (Hart 2013). Finally, if the experience of early criminal justice system contact and incarceration separates young people from supportive family members by severing or weakening social ties, they will have fewer social resources on which to draw as they attempt to rebuild their lives after prison (Desmond 2012; Western et al. 2015). Together these findings suggest that ongoing exposure to the criminal justice system before prison may have long-term consequences—cascading effects on early life, prison, and reentry experiences—that exacerbate racial disparity in transitions to adulthood.

#### **Pre-Prison Adulthood Transitions**

If whites are advantaged relative to blacks with regard to their pre-prison life-course development, those differences may explain differences in postrelease outcomes. Across multiple life-course domains, young black men are disadvantaged relative to their white counterparts. They consistently lag behind in terms of high school graduation and employment rates. For those whose education may be interrupted by early arrest and juvenile justice system contact, levels of education and employment lag behind those in the general population (Kirk and Sampson 2013; Western and Pettit 2005; Holzer, Offner, and Sorenson 2009). Among male state prison inmates age eighteen to twenty-four in 2004, only 14.3 percent of blacks and 19.6 percent of whites had finished high school (Ewert and Wildhagen 2011). For example, as shown in table 1, only 64.5 percent of young black men in our sample had ever been employed prior to their incarceration, whereas 76.5 percent of young white men were. If employment prospects are further hindered by stigma associated with criminal records, these inequalities are likely to grow even larger (Pager 2003).

Similar racial inequality exists in establish-

**Table 1.** Descriptive Statistics for Sample

Variable	Overall		Blacks		Whites	
	Mean	SD	Mean	SD	Mean	SD
<b>Pre-prison criminal justice contact</b>						
First arrest age	15.415	2.496	15.462	2.500	15.372	2.494
Juvenile commitment	0.440		0.428		0.451	
Number arrests	3.222	2.011	3.085	1.945	3.344	2.062 *
Number prior probation	0.808	0.951	0.789	0.947	0.824	0.956
Number prior custody	2.298	1.475	2.100	1.334	2.474	1.570 *
Prison enter age	20.818	1.990	20.917	1.980	20.731	1.996
<b>Pre-prison transition to adulthood markers</b>						
Has dependent	0.405		0.489		0.330	*
Ever married	0.051		0.046		0.055	
High school graduate	0.085		0.093		0.077	
Earned GED	0.304		0.209		0.388	*
Employed	0.706		0.645		0.760	*
Lived independent	0.338		0.325		0.349	
<b>Pre-prison mental health and substance abuse</b>						
Mentally ill	0.195		0.088		0.289	*
Daily alcohol use	0.108		0.078		0.134	*
Daily marijuana use	0.270		0.275		0.266	
Daily stimulant use	0.074		0.062		0.084	
Daily depressant use	0.025		0.015		0.035	*
<b>Prison experiences</b>						
Months in prison	22.388	19.123	24.029	20.277	20.928	17.922 *
Earned GED in prison	0.314		0.265		0.358	*
Had misconduct	0.608		0.663		0.560	*
Days in solitary	11.356	67.661	11.101	56.646	11.583	76.173

(continued)

**Table 1.** (continued)

Variable	Overall		Blacks		Whites	
	Mean	SD	Mean	SD	Mean	SD
<b>First postprison year social context</b>						
Days in Detroit	53.912	118.216	106.070	150.282	7.515	41.937 *
Tract disadvantage score	0.531	1.187	1.362	1.109	-0.216	0.627 *
Tract affluence score	-0.380	0.563	-0.365	0.500	-0.394	0.614
County crime rate per 1K	6.116	2.784	7.394	2.707	4.970	2.314 *
<b>First postprison year criminal justice system contact</b>						
Electronic monitoring	0.355		0.296		0.407	*
Number parole violations	1.139	1.351	1.123	1.426	1.154	1.281
Number arrests	0.538	0.778	0.596	0.790	0.485	0.765 *
Days held in custody	47.587	83.293	47.984	81.326	47.234	85.062
<b>First postprison year transition to adulthood markers</b>						
Continued education	0.066		0.059		0.073	*
Employed	0.535		0.410		0.647	*
Earnings	\$1,555.23	\$2,427.86	\$950.48	\$1,849.99	\$2,093.18	\$2,736.06 *
Days lived independent	87.183	121.370	84.129	122.572	89.900	120.315
<b>First postprison year substance abuse</b>						
Percent positive drug tests	0.109	0.224	0.138	0.252	0.083	0.193 *
Days in residential treatment	6.448	21.453	4.438	19.335	8.235	23.042 *
N		1300		612		688

Source: Authors' calculations based on data from MDOC, MSP, MJJ, MWDA, NSC, and USC.

Note: Fourteen Asian and Native American parolees were grouped with the white parolees. "Stimulants" are mainly cocaine, but also include methamphetamine and prescription stimulants such as Ritalin and Adderall. "Depressants" are mainly heroin and prescription opioids, but also include sedatives, tranquilizers, barbiturates, and benzodiazepines. Lived independent means living in a non-institutional, private residence apart from parents or older relatives (that is, alone, with a romantic partner, friend, or roommate). Continued education indicates that the young man either earned a GED or enrolled in college in the first year after prison. The tract and county variables are averages over all of the characteristics of the residential addresses where a young man lived during the first postprison year. We lack a non-institutional neighborhood address in the first postprison year for twenty-four parolees. The disadvantage and affluence scores were generated via factor analysis and are orthogonal to each other. The disadvantage score loads on percent black, poverty and unemployment rates, female-headed households, and welfare receipt. The affluence score loads on higher education, professional and managerial occupations, and higher median income. The scores are preferred due to multicollinearity between the indicators.

\* indicates a statistically significant (at  $p \leq .05$ ) difference between the black and white means.

ing residential independence. In a study of neighborhood change during transition to adulthood, Patrick Sharkey finds that 20 percent of young white people but only 13 percent of young black people lived independently as eighteen-year-olds (2012). To the extent that early life-course development sets the stage for later life-course development as theorized, these pre-prison racial inequalities should persist, and perhaps even widen after prison (see, for example, South et al. 2016)

### **Pre-Prison Substance Use and Mental Health**

Although white former prisoners have more education and formal work experience than black former prisoners, they also have higher rates of identified mental illness and substance use. In 2005, 55 percent of surveyed male state prison inmates (62.2 percent of whites and 54.7 percent of blacks) reported a mental health problem. Prior to their incarceration, state inmates who reported mental health problems were more likely than those who did not to be unemployed (29.9 percent versus 24.4 percent), experience homelessness (13.2 percent versus 6.3 percent), and report daily or almost daily drug and alcohol use (87.1 percent versus 77.2 percent) (James and Glaze 2006).

Between 2007 and 2009, 40.9 percent of male state prison inmates reported that they were under the influence of drugs or alcohol when they committed their offense. Over that same time period, black state prison inmates were less likely than white state prison inmates to report using cocaine (28.0 percent versus 41.7 percent), heroin (7.6 percent versus 24.7 percent), and methamphetamine (2.1 percent versus 34.0 percent). Only 28.5 percent of drug-dependent state prison inmates received substance use treatment while incarcerated (Bronson et al. 2017).

### **Prison Experiences**

The experience of prison may also exacerbate racial inequality in postprison transitions to adulthood. Blacks are more likely than whites to serve longer sentences, which creates larger gaps in their development during a critical period (Rehavi and Starr 2014). Although research on prison experiences has expanded in recent years, it is limited in scope, focusing mainly on

time served and behavior during incarceration (see, for example, Meade et al. 2013; Mears et al. 2016; Tiedt and Sabol 2015).

Misconduct violations can impact later life outcomes because they indicate continuity in proscribed and potentially criminal behavior and because the sanctions that often follow, such as solitary confinement, increased prison time, or the loss of treatment and educational opportunities, can have a negative impact on physical and psychological health (Morris 2016; Steiner and Cain 2017; Haney 2003; Smith 2006). The evidence on racial inequality in being cited for misconduct is mixed. Some researchers found racial disparity, whereas others did not (Gendreau, Goggin, and Law 1997; Steiner, Butler, and Ellison 2014). However, the greater tendency of young black men to engage in violence, which has been documented outside prison, also persists inside prison (LaFree, Baumer, and O'Brien 2010; Goetting and Howsen 1986; Harer and Steffensmeier 1996).

Blacks and whites may also receive different opportunities for human capital development in prison. For example, because they have weaker human capital foundations as they enter prison, young black prisoners may be less likely than their white counterparts to earn a GED during incarceration. To the extent that young black men have more harmful experiences in prison, racial inequality will be perpetuated during incarceration and young black men may experience poorer postprison life-course outcomes.

### **Racially Segregated and Unequal Social Contexts**

Social contexts—both local neighborhoods and broader geographies such as cities, counties, and labor markets—influence the social networks individuals form and the resources to which they have access. Racial, economic, and geographic inequalities in access to supportive social contexts and institutions, such as effective schools and colleges, may account for some of the poor outcomes of young black men relative to their white counterparts.

Many former prisoners return to particularly disadvantaged neighborhoods, characterized by poverty, joblessness, and high rates of crime and disorder (Cadora, Swartz, and Gordon

2003; Lynch and Sabol 2004; Solomon, Thomson, and Keegan 2004). Racial differences in the neighborhood contexts in which white and black former prisoners live, however, are stark (Massoglia, Firebaugh, and Warner 2013). Only whites experience worse neighborhood conditions after prison than before (Massoglia, Firebaugh, and Warner 2013; Warner 2014). Blacks in general return to poorer neighborhoods than whites after prison, mainly given the more general landscape of residential segregation by race rather than the impact of incarceration itself (Massoglia, Firebaugh, and Warner 2013; Lee, Harding, and Morenoff 2016).

Returning to disadvantaged neighborhoods after prison increases the risk of recidivism and reduces employment (Hipp, Petersilia, and Turner 2010; Kubrin and Stewart 2006; Mears et al. 2008; Morenoff and Harding 2011). Research suggests five processes through which social contexts affect formerly incarcerated young adults. First, disadvantaged neighborhoods tend to exert lower levels of informal social control over their residents and have higher rates of crime and disorder (Sampson, Morenoff, and Earls 1999; Sampson, Raudenbush, and Earls 1997). Former prisoners who return to neighborhoods with lower social control will face fewer barriers to returning to crime and substance abuse and therefore may also see employment and education as less appealing. Second, if disadvantaged neighborhoods are located in local labor markets with higher unemployment rates, returning to such neighborhoods will potentially increase unemployment and recidivism (Raphael and Weiman 2007; Sabol 2007). Third, residents of disadvantaged neighborhoods are often socially isolated, particularly from networks that might provide information about employment and education (Smith 2007; Wilson 1987; Young 2004). Fourth, disadvantaged neighborhoods tend to be located far from jobs (Mouw 2000; Wilson 1987). Finally, differential criminal opportunity theory suggests that disadvantaged neighborhoods provide more opportunities to engage in crime and substance abuse, both of which may lower prospects for employment or schooling (Cloward and Ohlin 1960). For example, disadvantaged neighborhoods tend to have a higher concentration of former prisoners and

higher rates of alcohol and drug use (Clear 2007; Freisthler et al. 2005; Hill and Angel 2005).

### **Path Dependence**

To the degree that whites are initially exposed to more supportive contexts and institutions in the period after their release from prison, those inequalities have the potential to magnify over time as longer-term trajectories are established. The emphasis on transitions and trajectories in the life-course framework suggests that early experiences after release from prison may be especially important for determining longer-term trajectories. Qualitative research has documented the optimism most formerly incarcerated individuals feel at the moment of release (Comfort 2012; Seim 2016; Harding et al. 2017). This suggests that motivation to work, enroll in school, and avoid further criminal justice contact could be maintained if the individual experiences supportive social institutions and contexts after release.

Initial post-incarceration successes may lead to future opportunities and exposure to supportive institutions and contexts. For example, stable housing may be the foundation on which other aspects of successful reentry rely (Bradley et al. 2001). Finding and maintaining employment, family connections, and health care, and avoiding substance use can be challenging without stable housing (Lutze, Rosky, and Hamilton 2013). Likewise, early success in the labor market or schooling may mitigate some of the stigma of a criminal record in the eyes of employers or landlords. Together, these ideas suggest that we should observe some degree of path dependence. Early post-prison experiences should predict later transitions to adulthood. To the extent that these early experiences are racially patterned, they may explain racial inequalities in longer-term trajectories.

### **DATA**

We collected administrative data for a randomly selected two-thirds sample of eighteen- to twenty-five-year-old males who were released on parole from Michigan prisons in 2003 ( $n = 1,300$ ) and followed for five to ten years, depending on the outcome. We collected and matched data from multiple sources: the Mich-

Michigan Department of Corrections (MDOC), the Michigan State Police (MSP), the Michigan unemployment insurance system (MUI), the Michigan Workforce Development Agency (MWDA), which tracks GED certifications, the National Student Clearinghouse (NSC), and the 2000 United States Census (USC).<sup>1</sup> Summary statistics are presented in table 1.

### Transition to Adulthood Outcomes

We focus on four transitional marker outcomes: residential independence, formal labor market participation, college enrollment, and desistance from criminal justice system contact. These outcomes reflect the transition to adulthood markers young Americans have traditionally been expected to meet (Arnett 2000; Danziger and Rouse 2007). To be clear, we expect young adults to complete and for many to continue their education, enter the labor market and ideally achieve full-time employment, and exit the homes of their parents and older relatives to live alone, with roommates, or a romantic partner. Although incarceration may constitute a “new stage in the life course” for many young Americans, particularly young black men, the markers of adulthood for individuals reentering society should reflect these characterizations of successful transitions to adulthood (Pettit and Western 2004, 151).

We created six-month indicators for each transitional marker. Continuing education is measured as enrollment in postsecondary educational institutions.<sup>2</sup> Residential independence, recorded by parole agents, is defined as living in a noninstitutional setting and apart

from parents or older relatives.<sup>3</sup> Employment in the formal labor market is measured using quarterly unemployment insurance (UI) records from 1997 to 2010, which include all earnings paid to that individual in each quarter. More than 90 percent of workers are covered by Michigan’s UI system, but informal employment is not covered, even if it is legal. However, we view formal employment as an important indicator of economic reintegration after prison, both because of the greater social protections that formal employment provides (such as workers compensation insurance, social security eligibility) and because formal employment is a stronger signal of integration into mainstream society. Given that our sample is justice involved, we measure periods during which the young men were neither arrested nor incarcerated to create a desistance indicator. We follow college enrollments for ten postprison years, desistance for seven, and residential independence and employment for five.

### Pre-Prison Experiences

Unlike much existing prior work on racial inequality in the criminal justice system, our data allow us to control for most of the criminal justice system contacts experienced by an individual prior to incarceration. Our indicators of juvenile justice system contact include first arrest age and whether the young men had been committed as juveniles. We have complete arrest, conviction, and punishment records that include whether probation or a custodial (jail or prison) sentence resulted from each conviction. Thus we are able to account for and ex-

1. Unemployment insurance data were matched on social security numbers, birthdates, and names, including all available aliases. Education data were matched on birthdates and names, including all available aliases.

2. Degree receipt is unfortunately not included in the National Student Clearinghouse data for all institutions during the time period we are studying.

3. We examined the quality of the residential data recorded by parole agents and find high levels of agreement between these data and another source. The principal investigator conducted a separate but related longitudinal qualitative study of twenty-four former prisoners who were interviewed once in prison prior to release and at regular intervals for the two years after release. For eighteen of those subjects, we were able to compare self-reported residential histories from our own interviews for the first few months after release with those recorded in Michigan Department of Corrections administrative data. Fourteen (78 percent) of these residential histories matched exactly; the remaining four had one missing address each. Overall, thirty-three of thirty-seven addresses were correctly recorded by MDOC parole agents. Missing addresses were either brief stays or short periods of living on the streets, and those with missing addresses tended to be more residentially mobile, suggesting that the administrative data will understate mobility slightly for some parolees.

amine which criminal justice system contacts are most determinative of eventual incarceration.

Our transition to adulthood measures characterize the progress each young man had made before prison. They include whether he had finished high school, earned a GED, held a job, or lived independently. We also have preprison indicators of parenthood and marriage. Other measures include self-reported mental illness and self-reported daily substance use, each of which signifies a potential impediment to postprison transitions.

### Prison Experiences

The MDOC data include indicators of elements of the prison experience that may influence the postprison life course in both positive and negative ways. We created variables that allow us to control for months in prison, misconducts charged during that time, and the number of days spent in solitary confinement. Finally, we also control for a potentially beneficial aspect of the prison experience: earning a GED while incarcerated.

### First Postprison Year Experiences

We observe the characteristics of the neighborhoods (census tracts), cities, and counties in which each subject lived during the first postprison year. Because many neighborhood metrics are highly correlated, we created standardized, orthogonal neighborhood disadvantage and advantage scores using factor analysis. The disadvantage score loads on percentage black, median family income, the poverty and unemployment rates, the proportion of residents with less than a high school degree, and the percentage of households that receive public assistance and are headed by females. The advantage score loads on the percentage of people who have jobs in managerial professions and college degrees, the proportion of families whose income exceeds \$75,000, and the median income. When an individual lives in more than one neighborhood during the first postprison year, we create weighted (by the number of days) averages of the disadvantage and advantage scores. We similarly control for county crime rates. To ameliorate concerns about the extreme disadvantage of people living in De-

troit, we also control for the number of days each parolee lived in Detroit during the first postprison year.

To account for postprison path dependence, we create indicators of criminal justice contact, transition to adulthood marker achievement, and substance abuse for the first year. We observe several kinds of criminal justice contact: whether they were electronically monitored and the number of parole violations, arrests, and days incarcerated they experienced. Likewise, we observe several transitional markers: days lived independently, continuing education (that is, GED completion or college enrollment), employment, and earnings. Two measures indicate substance abuse: days spent in residential substance abuse treatment and the percentage drug tests that were positive. Subjects spend, on average, just under one week in residential treatment, far below the recommended three to nine months (Farabee, Prendergrast, and Anglin 1998). Residential treatment therefore is likely more indicative of a substance abuse problem than effective treatment for it.

## METHODS

The transition to adulthood literature has been limited by the inability to consider more than one transitional outcome at a time or to consider the relationships between more than two markers at a time (Shanahan 2000). Without the capacity to consider adult transitions in their entirety, it is impossible to ascertain the interrelationships between the markers. Just as the transition to adulthood literature has been limited by the inability to consider multiple outcomes simultaneously, the criminological literature has been limited by predicting life-course outcomes without considering multiple types of contact with the criminal justice system simultaneously. Our methodological approach overcomes these limitations.

### Group-Based Multitrajectory Models

Both the life-course and transition to adulthood frameworks emphasize the importance of examining trajectories or pathways, rather than single points in time, to more completely capture outcomes. Single point-in-time outcome measures may poorly summarize former

prisoners' postrelease experiences, particularly if those experiences evolve in fits and starts as they wrestle with the joint processes of reintegration into society and desistance from criminal justice contact (Sampson and Laub 2003; Paternoster and Bushway 2009). Moreover, point-in-time measures may not fully capture divergent trends across individuals because they are often noisy, meaning they neither entirely capture the construct of interest nor do they *only* capture the construct of interest. Many noisy measurements captured over time and compared between individuals can create a more accurate representation of the underlying construct than a single point-in-time measure (Sweeten 2012).

To adhere to the life-course and transition to adulthood frameworks, we map postprison trajectories with a recent extension to group-based trajectory modeling (GBTM) called group-based multitrajectory modeling (GBMTM). GBTM was developed to study life-course development in justice-involved samples such as ours (Nagin and Land 1993; Nagin 2005). It combines features of latent class analysis and multilevel modeling to characterize variation in longitudinal outcomes and the processes that generate them. The models identify latent groups of individuals who follow similar outcome trajectories, producing three pieces of information: the number of groups that best describe the data, a description of the average trajectory for each group, and an estimate of the probability that each person belongs to each group.

Unlike GBTM, in which a single trajectory is modeled, GBMTM allows multiple measures of the same underlying construct to be modeled simultaneously (Nagin et al. 2016). In contrast to dual trajectory modeling, in which two coevolving processes are modeled, GBMTM models a single process for which multiple indicators exist. Thus GBMTM models each of the indicators separately and in relation to each other producing, in effect, multitrajectory groups comprised of trajectory groups.

We use GBMTM to model the transition to adulthood, a process for which we have four indicators: employment, residential independence, college enrollment, and desistance from criminal justice contact. Via GBMTM, we exam-

ine how the achievement of one transitional marker relates to the achievement of others. The software models each of the transition to adulthood marker trajectories separately and in conjunction with each other to produce multitrajectory groups that characterize the postprison life-course outcomes of the young men in our sample, beginning with the second postprison year and following them at six-month intervals through the last observation year for each marker.

To determine the optimal number of latent groups, we follow the conventional advice of considering a combination of measures of fit (the Bayesian Information Criterion and appropriateness of functional form), classification (the average posterior probability of group assignment and the odds of correct classification [OCC]), group size and composition, and extant theory and evidence to determine whether the resultant groups “communicate the distinct features of the data” (Nagin 2005, 77). The last criterion, admittedly subjective, means that if an additional trajectory group has a substantively similar trajectory pattern as another group, then the model with fewer groups should be preferred.

### Post-Trajectory Analysis

After mapping the postprison transition to adulthood trajectories, we examine the characteristics of the members of each multitrajectory group to determine whether and how blacks and whites cluster differentially into trajectory groups. The postprison trajectory groups then become our dependent variables in a series of multinomial logit models. The key independent variables are the groups of explanatory variables that capture each of our potential explanations for racial inequality in postprison transition outcomes: pre-prison criminal justice contact, pre-prison adult transitions, pre-prison substance use and mental health problems, in-prison experiences, the first postprison year social context, and the first postprison year path dependence. To address the noncomparability of coefficients from logit models with different explanatory variables, we compare average marginal effects, focusing on the effect of race as we add the explanatory variables in groups (Mood 2010).

## RESULTS

To determine the potential sources of racial inequality in the transition to adulthood after prison, we describe the pre-prison and one-year postprison life-course conditions of the parolees; describe postprison transition to adulthood trajectories and how they vary by race and other preprison and one-year postprison characteristics; and determine how well the explanations we have proffered explain racial inequality in postprison transition to adulthood trajectories.

### Pre-Prison and Postprison Racial Differences

If we observe racial inequality in pre-prison criminal justice contact and life-course development and one-year postprison social context, criminal justice contact, and health and human capital investments, we can expect those inequalities to account for racial inequality in the postprison transition to adulthood. Here we present evidence of racial inequality in our proposed determinants of postprison transition to adulthood trajectories (see table 1). The implications of those differences vary, depending on the postprison transitional trajectories the young men follow.

#### *Prior Criminal Justice System Contact*

At prison entry, whites and blacks do not differ in terms of their age or juvenile histories. They do, however, differ on most measures of adult criminal justice system contact. Before their incarceration, whites experience more prior arrests, convictions, and postconviction custodial sentences.<sup>4</sup> In other words, blacks are incarcerated after fewer criminal justice contacts than whites are. Although the racial differences in prior record length are absolutely small, ranging from 0.2 arrests to 0.4 custodial sentences, they are statistically significant.

#### *Prior Life-Course Development*

Table 1 also shows that differences between blacks and whites in terms of their pre-prison life-course development are statistically significant. Blacks are 48.1 percent more likely than whites to have children and to live independently. Although high school graduation rates

do not differ by race, whites are 17.8 percent more likely to be employed and 61.1 percent more likely to earn GEDs. However, whites are also more than twice as likely to report mental illness and about twice as likely to use both legal and illegal substances daily.

#### *Postprison Social Context*

To document the vastly different social contexts to which blacks and whites return from prison, we present the average characteristics of the postprison census tracts and counties in which the parolees lived during their first postprison year in table 2. Racial differences on each tract and county characteristic are substantial. County crime rates are 48.8 percent higher in the counties to which blacks return than they are in the counties to which whites return. At the neighborhood level, we observe that people in the neighborhoods to which the blacks returned are, on average, twice as poor, almost twice as likely to be unemployed, and 38 percent less likely to have achieved a high school education.

#### *One-Year Postprison Path Dependence*

During the first postprison year, young white men are 37.6 percent more likely to be on electronic monitoring than young black men are (see table 1). This may be because, on average, black men serve 129.6 percent of their minimum sentence, and white men only 90.9 percent of their minimum sentence and may be electronically monitored until they reach their minimum. Despite the more stringent postprison surveillance of young white men, young black men are 22.9 percent more likely to be rearrested after release.

In addition, young white men seem able to develop more human capital than young black men during the first postprison year. Whites are 57.7 percent more likely to be employed. When employed, young white men earn more than twice as much as their black counterparts.

In terms of postprison substance use, young white men (21.7 percent) are more likely than black (15.4 percent) to enter residential substance abuse treatment, which may reflect deeper substance abuse problems, as indicated

4. Just as arrests do not necessarily result in conviction, convictions do not necessarily result from arrests.

**Table 2.** Postprison Social Context for Blacks and Whites

	Overall		Blacks		Whites	
	Mean	SD	Mean	SD	Mean	SD
Poverty rate	0.178	0.116	0.236	0.113	0.125	0.090
Unemployment rate	0.087	0.047	0.113	0.049	0.063	0.029
Percent did not graduate	0.195	0.088	0.229	0.087	0.165	0.078
Percent single mothers	0.257	0.142	0.349	0.125	0.174	0.098
Percent black	0.350	0.365	0.631	0.322	0.097	0.157
Median income	\$44,470.94	\$16,359.12	\$36,965.89	\$13,850.87	\$51,216.56	\$15,486.83
Percent owner occupied	0.665	0.177	0.589	0.157	0.733	0.165
Percent same address	0.746	0.083	0.736	0.083	0.756	0.082
Percent professional	0.239	0.096	0.218	0.097	0.257	0.091
Percent high income	0.219	0.126	0.173	0.103	0.261	0.131
Percent on assistance	0.091	0.091	0.117	0.100	0.067	0.075
N		1300		612		688

Source: Authors' calculations based on data from USC.

Note: Each indicator is an average over all of the neighborhoods, defined as census tracts, in which each parolee lived in the first year after prison. Twenty-four parolees do not have a known noninstitutional residential tract during the first postprison year.

\* indicates a statistically significant (at  $p \leq .05$ ) difference between the black and white means.

**Table 3.** Initial Postprison Transition to Adulthood Multitrajectory Model Comparisons

Number of groups	4	4	5	5
Bayesian information criterion	-22,616	-22,851	-22,215	-22,133
Lowest average group membership probability	92.8	91.4	91.5	89.6
Lowest group odds of correct classification	42.4	31.8	28.8	34.8
Lowest number of group members	111	230	102	92
Highest number of group members	536	388	354	300

Source: Authors' calculations based on data from MDOC, MSP, MUI, MWDA, NSC, and USC.

Note: The fit of each of the potential multitrajectory group models to the data appears very good. The lowest group membership probabilities are well above the recommended 70 percent threshold for each model. Likewise, the lowest odds of correct classification far exceed the recommended threshold of five in each model. Combined these statistics indicate clear group distinctions and accurate classification of sample members into trajectory groups. The downward trend in the BIC as more groups are added also conforms to expectation. However, these conventional measures of fit do not isolate the optimal model with precision. Instead we rely on group size and composition to select the five-group model, which includes reasonably sized groups with easily identifiable differentiating characteristics. To clarify, were we to accept the first four-group model, 41.2 percent of the sample would cluster into the largest group that does not distinguish between the parolees who maintain low levels of employment, independence, and desistance, and those who do not. Were we to accept the second four-group model, the parolees whose commitment to education distinguishes them would be subsumed into the other groups. Similarly, if a sixth group is added, it does not differ substantively from the group that maintains low levels of employment, independence, and desistance.

by their higher pre-prison prevalence of cocaine and heroin abuse. Young black men, on the other hand, are 66.5 percent more likely than white men to test positive for drugs when tested, which may be because their drug of choice, marijuana, lingers longer in the bloodstream (Visher 1991).

### Postprison Desistance and Transitional Outcome Trajectories

To examine post-incarceration adult transitions holistically, we estimate a group-based multi-trajectory model that incorporates four trajectory markers measured at six-month intervals for five to ten years after prison, starting with the second postprison year: college enrollment, employment, living independently (that is, not with parents or older relatives), and desistance (that is, no arrest or incarceration). We implement GBMTM with the *traj* module in STATA. We considered models with four through six groups, as shown in table 3. We discuss how we settled on the five-group model in the notes to table 3. The five-group model we chose is shown in figure 1 and described in table 4.

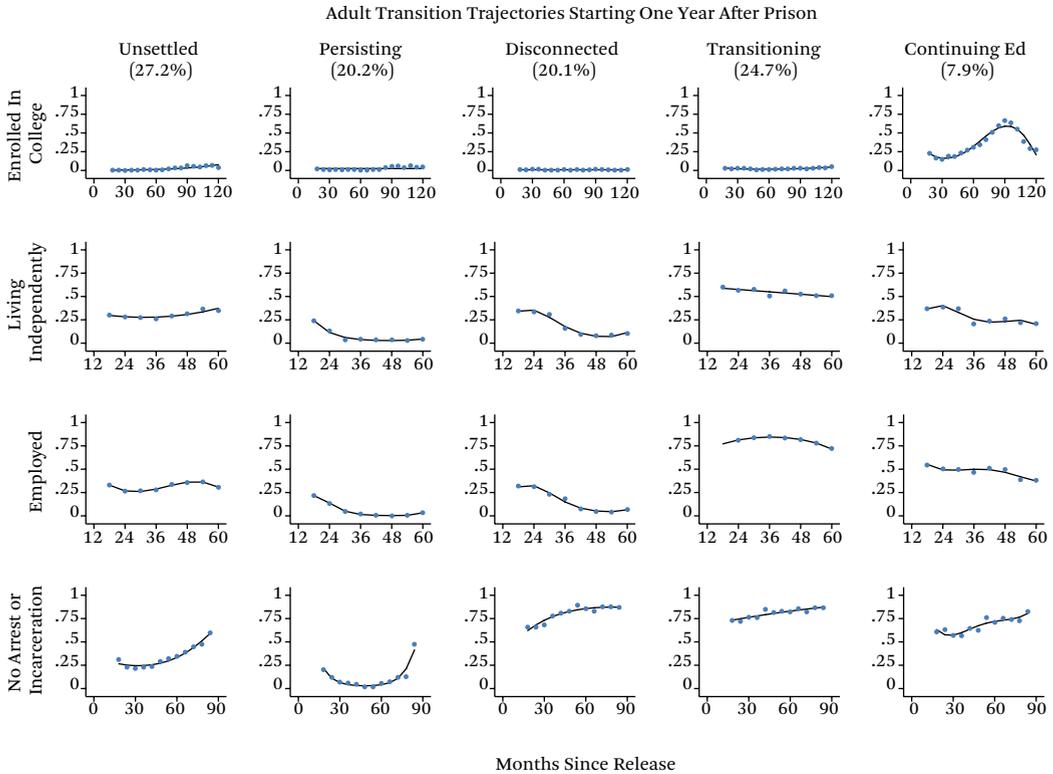
### Postprison Transitions to Adulthood

As shown in figure 1 and table 4, five developmental trajectories characterize the postprison transitions to adulthood of the young men ( $n = 1,300$ ) in our sample. We named the trajectories to highlight the key differences between them, not to comprehensively summarize the experiences of the young men who follow each trajectory across all four domains.

Relative to the young men who follow other trajectories, those who follow *transitioning* trajectories ( $n = 321$ ) most consistently meet a majority of the adulthood markers. These transitioners are unlikely to attend college. However, they maintain a high probability of employment (approximately 75 percent or greater) and a moderate probability of living independently (approximately 50 percent or greater), although their ability to maintain their independence declines over time. Additionally, these young men are increasingly likely to avoid arrest and incarceration during follow-up.

Young men on *continuing education* trajectories ( $n = 102$ ) display a commitment to education that sets them apart from the young

**Figure 1.** Postprison Transition to Adulthood Multitrajectories Beginning One Year After Release from Prison



Source: Authors' calculations based on data from MDOC, MSP, MUI, MWDA, NSC, and USC.

**Table 4.** Postprison Groups, Group Membership Probabilities, and Odds of Correct Classification

Group Number	Group	N	Percentage of Sample	Mean Probability of Group Membership	Odds of Correct Classification
1	Unsettled	354	27.23	91.52	28.83
2	Persisting	262	20.15	94.94	74.31
3	Disconnected	261	20.08	92.43	48.60
4	Transitioning	321	24.69	95.15	59.88
5	Continuing education	102	7.85	94.65	207.95

Source: Authors' calculations based on data from MDOC, MSP, MUI, MWDA, NSC, and USC.

men on each of the other trajectories. Like the transitioners, these young men increasingly avoid contact with the criminal justice system. They struggle to meet the markers of adulthood, however. Their initially moderate probabilities of employment and independence

erode over time. Their low probability of employment five years after prison may motivate their continuing education, which peaks several years later. That these young men have the means to enroll in postsecondary education despite meager earnings suggests that

they are relying heavily on social support from parents or older relatives who are likely less disadvantaged than those of the young men on other trajectories.

Relative to the other young men, those who follow *persisting* trajectories (n = 262) most consistently do not meet the adulthood markers. Instead, they remain deeply justice-involved, maintaining high probabilities of arrest and incarceration. By the fourth postprison year, the likelihood that they will be incarcerated or arrested is near certain. Accordingly, by the third postprison year and continuing until the end of follow-up, persisters have zero or near zero probability of employment, independent living, or college enrollment.

By contrast, young men on *unsettled* trajectories (n = 354) make some progress on their adult transitions even as they also remain justice involved. They maintain low but nontrivial probability of employment and independent living (approximately 25 percent) while sustaining moderate (25 to 50 percent) probability of arrest or incarceration throughout follow-up. As is true of the other groups, unsettled young men have near zero probability of continuing their education after incarceration.

Those who follow *disconnected* trajectories (n = 261) avoid contact with the criminal justice system, but also do not participate in the labor market or educational institutions. Like persisters, the disconnected have zero or near zero probability of meeting any of the four adulthood markers by four years after prison. However, unlike persisters and more in line with transitioners, disconnected young men increasingly avoid criminal justice contact over time. Based on research on the role of family in providing support for the formerly incarcerated, we suspect that young men who follow disconnected trajectories are relying heavily on social support to meet their basic material needs (see Harding et al. 2014).

### *Differences Between Trajectories*

As shown in table 5, we tested for racial differences between the five postprison trajectory groups using ANOVA. We find statistically significant differences in racial composition. The

most distinct is between the persisting and transitioning trajectories: 71.3 percent of transitioners are white, but only 37.0 percent of persisters are. The other trajectories are more racially balanced. Young men on unsettled trajectories are majority white (52.5 percent), whereas those who follow disconnected (49.0 percent white) and continuing education (47.1 percent) are majority black.

Many of the statistically significant differences shown in table 5 distinguish the trajectories from each other.<sup>5</sup> Transitioners have better overall life-course conditions than the young men who follow the other postprison trajectories, even though they are not always the most advantaged (for example, with respect to education). Prior to their incarceration, young men on transitioning trajectories have the highest levels of employment and residential independence and the lowest levels of substance use. After prison, they return to far less disadvantaged neighborhoods, where they have the highest probability of employment and the lowest levels of criminal justice contact during the first postprison year.

Education clearly differentiates the young men following continuing education trajectories from transitioners and those on the other trajectories. Young men who continue their education are the most likely to graduate high school, earn GEDs in prison, and enroll in college during the first postprison year. They also return from prison to the most affluent neighborhoods, which suggests that they have access to the means to enroll in postsecondary education.

By contrast, lack of engagement in human capital development distinguishes the young men who follow disconnected trajectories from those on other trajectories. Although they are oldest at prison entry, disconnected young men are least likely to have completed secondary education or to have held a job. That trend continues during and after prison. Disconnected young men are least likely to earn a GED in prison and are only more likely than the persisters to hold a job in the first postprison year. They appear to benefit from greater social support, however. Despite low employment and

5. Table A1 shows the same information as table 5 separately by race.

**Table 5.** Average Characteristics of Postprison Group Members

Covariate		F-Statistic	Unsettled	Persisting	Disconnected	Transitioning	Continuing Education
Is white	*	19.343	52.542	37.023	49.042	71.340	47.059
First arrest age	*	27.253	14.621	14.805	16.176	16.106	15.608
Juvenile commitment	*	15.075	0.534	0.561	0.333	0.324	0.441
Number arrests	*	7.246	3.415	3.573	2.713	3.146	3.196
Number probation		0.792	0.777	0.809	0.805	0.875	0.706
Number custody	*	4.383	2.497	2.363	2.008	2.283	2.225
Prison enter age	*	2.670	20.766	20.561	21.080	20.922	20.667
Has dependent		0.585	0.395	0.416	0.425	0.408	0.343
Ever married		1.109	0.045	0.034	0.065	0.050	0.078
High school graduate	*	4.892	0.088	0.046	0.073	0.090	0.186
Earned GED	*	2.650	0.308	0.317	0.230	0.352	0.294
Employed	*	8.318	0.715	0.641	0.625	0.816	0.706
Lived independent	*	4.223	0.339	0.260	0.310	0.414	0.363
Mentally ill		0.669	0.203	0.214	0.165	0.187	0.216
Daily alcohol use	*	7.565	0.175	0.122	0.057	0.078	0.059
Daily marijuana use	*	11.364	0.356	0.351	0.188	0.181	0.255
Daily stimulant use	*	6.202	0.113	0.107	0.054	0.028	0.049
Daily depressant use		1.519	0.034	0.038	0.015	0.012	0.029
Months in prison		0.576	21.707	23.815	21.762	22.285	23.016
Earned GED in prison		0.865	0.319	0.317	0.272	0.324	0.363
Had misconduct	*	3.688	0.638	0.679	0.598	0.558	0.510
Days in solitary	*	2.734	11.503	22.950	7.678	5.838	7.843
Days in Detroit		2.314	48.359	60.622	69.640	46.760	38.206
Tract disadvantage	*	13.394	0.527	0.791	0.769	0.185	0.368
Tract affluence	*	3.055	-0.425	-0.358	-0.391	-0.395	-0.209
County crime rate	*	5.801	6.009	6.722	6.281	5.795	5.514
Electronic monitoring	*	2.520	0.421	0.313	0.330	0.346	0.324
Number parole violations	*	22.556	1.517	1.450	0.885	0.704	1.049
Number arrests	*	35.923	0.709	0.889	0.322	0.274	0.422
Days held in custody	*	40.366	69.229	85.134	20.287	19.704	33.637
Continued education	*	15.212	0.045	0.050	0.046	0.062	0.245
Employed	*	32.840	0.492	0.351	0.452	0.766	0.647
Wages	*	40.016	\$1,086.99	\$873.15	\$1,093.25	\$2,893.29	\$1,903.49
Days lived independent	*	15.229	66.161	61.500	93.241	127.424	83.971
Percent positive tests	*	6.840	0.111	0.167	0.096	0.081	0.070
Days treatment		0.362	6.116	5.706	7.245	7.162	5.216

Source: Authors' calculations based on data from MDOC, MSP, MUI, MWDA, NSC, and USC.

Note: Within group means and group differences as determined by ANOVA reported.

\* indicates a statistically significant (at  $p \leq .05$ ) difference between the group means.

education levels, many are able to live independently.

Finally, the young men on persisting and unsettled trajectories are most similar to one another before and during incarceration. They are youngest at first arrest and most likely to have

juvenile commitments. They are most likely to abuse all types of drugs and alcohol. Interestingly, substance use is more prevalent among the unsettled, suggesting that this may be the primary challenge for these young men as they transition to adulthood. During prison, persist-

ing and unsettled young men are the most likely to be cited for misconduct.

The first postprison year distinguishes persisters from the unsettled. Persisters are arrested more often and held in custody longer than unsettled young men are. Persisters are also 14.1 percentage points less likely to be employed during the first postprison year. When employed, persisters on average earn the least money. Therefore, the first postprison year may be a crucial period for intervention.

### Accounting for Racial Inequality

Only 25 percent of the young men in our sample follow the postprison trajectory that suggests they are transitioning to adulthood. Seventy-one percent of them are white. To determine why formerly incarcerated young white men make more progress than their black counterparts, we estimate multinomial logit models that predict the probability that individuals will follow each of the other trajectories, relative to the transitioning trajectory. As shown in table 6, we then calculate the average marginal effect (AME) of race as variables that reflect those explanations are added to the model (full model results provided in table A2; baseline group differences in race provided in appendix table A1). We examine whether the racial differences between the young men who follow transitioning trajectories and those who follow others can be explained by pre-prison criminal justice contact, pre-prison transitional marker achievement, pre-prison substance use and mental health, in-prison experiences, postprison social context, postprison criminal justice contact, postprison substance use, or postprison path dependence.

### Persisting Versus Transitioning Trajectories

The largest uncontrolled racial difference in trajectory group membership is between the persisting and transitioning trajectories. Whites are 12.9 percentage points less likely than blacks to be persisters. Controlling for pre-prison criminal justice contact, human capital development, and substance use and mental health exacerbates that inequality. After accounting for those pre-prison differences, young white men are 17.1 percentage points less likely than black to follow the persisting trajec-

tory. Ordinarily, controlling for a variable associated with race and with the outcome would reduce the racial difference. However, these variables are what methodologists call suppressor variables. When uncontrolled, they suppress the racial difference, making it appear smaller than it is (see MacKinnon, Krull, and Lockwood 2000). Substantively, this means that if whites had the same values on these variables as blacks, they would be even more likely than blacks to follow a persisting trajectory.

In contrast, controlling for postprison social context and path dependence has the expected effect. Racial inequality is reduced but not eliminated. After including variables related to social context, criminal justice contact, transitional marker achievement, and substance abuse during the first postprison year, whites are 10.5 percentage points less likely than blacks to follow the persisting trajectory. Most of the reduction is due to racial differences in social contexts, though some is also due to criminal justice contact. The residual racial difference is statistically significant.

### Unsettled Versus Transitioning Trajectories

Blacks and whites are equally likely to follow unsettled trajectories relative to transitioning trajectories (the unconditional AME is  $-0.004$ ). Although conditioning on our explanatory variables causes the race AME to fluctuate somewhat, it is not statistically significant in any model.

### Disconnected Versus Transitioning Trajectories

In the unconditional model, young white men are somewhat less likely than their black counterparts (3.1 percentage points) to follow disconnected trajectories, although the difference is not statistically significant. As we add our explanatory variables to this model, the racial difference shrinks to close to zero and then becomes more and more positive. Again, we observe the suppressing influence of some explanatory variables. That is, once we hold constant pre-prison experiences, in-prison experiences, postprison social context and first postprison year adult markers, whites are actually more likely than blacks to follow disconnected relative to transitioning trajectories.

In contrast, controlling for the postprison

**Table 6.** Average Marginal Effect (AME) of Being White Relative to Being Black as Explanatory Variable Groups Are Added to the Multinomial Logit Model

	Pre-Prison Life Course				Postprison Path Dependence			
	Pre-Prison Criminal Justice Contact	Pre-Prison Adult Markers	Pre-Prison Substance Use and Mental Health	Prison Experience	First Postprison Year Social Context	First Postprison Year Criminal Justice Contact	First Postprison Year Adult Markers	First Postprison Year Substance Abuse
<b>Unsettled versus transitioning pathways</b>								
White	-0.004	-0.028	-0.036	-0.036	-0.040	-0.024	-0.018	-0.015
SE	0.025	0.026	0.030	0.031	0.040	0.041	0.042	0.043
t	-0.168	-1.051	-1.214	-1.161	-0.994	-0.584	-0.429	-0.355
<b>Persisting versus transitioning pathways</b>								
White	-0.129	-0.148	-0.171	-0.172	-0.126	-0.113	-0.110	-0.105
SE	0.022	0.023	0.026	0.027	0.034	0.034	0.035	0.035
t	-5.763	-6.475	-6.708	-6.442	-3.734	-3.369	-3.148	-3.010
<b>Disconnected versus transitioning pathways</b>								
White	-0.031	-0.003	0.032	0.049	0.067	0.061	0.078	0.073
SE	0.022	0.022	0.023	0.025	0.034	0.035	0.036	0.036
t	-1.401	-0.134	1.365	1.994	1.995	1.740	2.169	2.030
<b>Continuing education versus transitioning pathways</b>								
White	-0.018	-0.021	-0.028	-0.041	-0.063	-0.070	-0.077	-0.078
SE	0.015	0.017	0.018	0.017	0.021	0.023	0.022	0.022
t	-1.229	-1.259	-1.571	-2.341	-2.965	-3.085	-3.486	-3.499
N	1300	1300	1300	1300	1276	1276	1276	1276

Source: Authors' calculations based on data from MDOC, MSP, MUJ, MWDA, NSC, and USC.

Note: In the final multinomial logit model, each set of explanatory variables is jointly statistically significant at  $p \leq .05$ . See the appendix for the final model.

year criminal justice contact and substance abuse variables reduces the white-black inequality. In other words, greater postprison criminal justice contact and substance abuse among blacks increases the probability of blacks following disconnected trajectories, although not enough to offset the other factors that favor blacks in this comparison. In the fully specified model, young white men are more likely than black (7.3 percentage points) to disconnect rather than transition, a statistically significant residual racial difference.

### *Continuing Education Versus Transitioning Trajectories*

In the uncontrolled model, whites are 1.8 percentage points less likely than blacks to follow continuing education rather than transitioning trajectories, a difference that is not statistically significant. Adding explanatory variables consistently widens, rather than closes, this gap. That is, conditioning on pre-prison adult markers, in-prison experiences, the first year postprison social context, and first postprison year path dependence increases the black-white inequality in these two groups. These too are suppressor variables. If blacks had the same markers, experiences, social contexts, and outcomes as whites, they would be even more likely than whites to continue their education. In the final specification, young black men are 7.8 percentage points more likely than white to follow continuing education trajectories. Once again, the residual racial difference is statistically significant.

## **DISCUSSION**

In our sample of eighteen- to twenty-five-year-old men who were paroled from Michigan state prisons in 2003 and followed for five to ten years, we observe racial inequality in transition to adulthood outcomes that include enrolling in college, finding employment, achieving residential independence, and desisting from criminal justice contact. In estimating postprison trajectories to adulthood, we address what had been a persistent shortcoming in the literature: the inability to consider multiple adulthood markers at the same time. We use group-based multitrajectory modeling to map the former prisoners' transitions to adulthood.

We find that the considerable variation in postprison trajectories does not correspond to a simple relationship between continued criminal justice contact and outcomes in other domains. Rather than simply identifying persisters and desisters, our analysis reveals five trajectories the young men follow after prison that differ in substantively meaningful ways. These trajectories enrich our understanding of desistance and post-incarceration life-course development because they describe how desistance relates to key life-course transitions.

Two of the trajectories we identify coincide with expectations about the relationship between criminal justice contact and life-course development. About 25 percent of our sample belongs to a transitioning group, which avoids criminal justice contact and maintains high employment and residential independence, and about 20 percent to a persisting group, which experiences high rates of continued criminal justice contact and little employment or residential independence.

More than half of the sample belongs to one of three other groups, which complicates our understanding of the transition to adulthood after prison. The largest group, at 27 percent, includes those we term unsettled young men. They maintain low but nonzero levels of criminal justice contact but also experience some formal employment and residential independence. This group seems to capture young men who are waffling between conventional pathways such as employment and residential independence and continued contact with the criminal justice system. Such young men might be most amenable to policy intervention, particularly substance abuse treatment, during the first postprison year. The fourth group, 20 percent of the sample, includes those we call disconnected. They also show little to no employment or residential independence but in addition have no further contact with the criminal justice system. This group has not achieved conventional markers of adulthood but also has managed to avoid further criminal justice contact. To improve their transitional marker outcomes, policymakers might focus on fostering their engagement in the labor market and educational institutions (see, for example, Ug-

gen 2000). The final group, at about 8 percent of the sample, has declining employment and residential independence but instead of engaging in criminal justice contact, these young men eventually enroll in postsecondary schooling. This final group follows an alternative pathway to adulthood other than employment, albeit one that takes longer to realize.

A second and related finding is that many formerly incarcerated young men are struggling to transition to adulthood, at least by conventional measures. On the one hand, more than half of our sample follow trajectories that exhibit approximately 25 to 40 percent initial probabilities of criminal justice contact that decrease over time. On the other hand, the likelihood that these young men will achieve one or more of the traditional markers of adulthood remains low. The average probability of achieving residential independence by the fifth post-prison year is below 50 percent across all groups. Only among transitioners is the average probability of employment above 50 percent by the fifth year after release. Those on continuing education trajectories have between a 25 and 50 percent chance of enrolling in college during the ten years after their release from prison, but theirs is the smallest group.

Finally, we find sizable racial inequalities in transition to adulthood outcomes that we are unable to explain. Young black men experience poorer transition to adulthood outcomes than young white men. We identify and test several possible explanations for racial inequality in transition to adulthood outcomes: pre-prison criminal justice contact, pre-prison adult transitions, pre-prison substance use and mental health, postprison social context, and post-prison path dependence. We do so by comparing transitioners with the young men on other trajectories using multinomial logit models, to which we sequentially add variables to control for these explanations.

A number of the potential explanations are clearly unable to account for these racial differences, at least with the measures available to us. None of the pre-prison or in-prison variables explained racial inequalities in post-prison transition to adulthood trajectories. Indeed, conditioning on these variables sometimes exacerbated racial inequalities. For ex-

ample, in each of the trajectory group comparisons, pre-prison substance abuse and mental health problems negatively affect each transition to adulthood marker achievement. Young white men are far more likely than their black counterparts to abuse drugs and alcohol and to report mental health problems. As a result, controlling for those factors makes the racial inequality more apparent.

Such *suppression effects* also explain why controlling for pre-prison criminal justice contact increases the apparent racial inequality in the comparisons between persisters and transitioners and between those who belong to the continuing education versus transitioning group. Young men who had more pre-prison criminal justice contact are more likely to persist or continue their education than they are to transition; and young white men have more pre-prison criminal justice contact than their black counterparts.

Substantively, that young white men have more serious prior criminal histories suggests differential treatment by young black men in the criminal justice system. Most of the men in our sample are first-time inmates. Relative to their white counterparts, young black men are incarcerated after fewer arrests and prior convictions involving custodial sentences, in part because they are more likely to be convicted of weapons offenses, violent offenses, and drug offenses, which are punished severely. Put another way, if young black men had the pre-prison criminal justice contact of their white counterparts, they would be 1.9 percentage points more likely to persist and 2.8 percentage points more likely to disconnect than to transition.

What, then, does explain racial inequalities in transition to adulthood outcomes? The starkest difference is between the persisting versus transitioning trajectories. Young white men are more likely to follow transitioning trajectories, and young black men more likely to follow persisting. The difference is 17 percentage points after pre-prison and in-prison experiences are controlled. That racial difference is reduced to just over 10 percentage points by conditioning on postprison experiences. Post-prison social contexts and criminal justice contact account for almost all of this reduction.

Racial inequality in the first postprison year social context accounts for 26.5 percent of the racial inequality in transition to adulthood outcomes between the young men who follow these two trajectories. In addition, first postprison year criminal justice contact and substance abuse explain some of the racial difference in membership between the two trajectories.

These findings are generally congruent with research that has found “little evidence” that long-term trajectories of criminal justice contact can be predicted from static early life-course conditions (Sampson and Laub 2005, 31). In fact, as Edward Mulvey and colleagues predict, we find considerable evidence that dynamic early postprison experiences in life-course domains other than criminal justice contact explain some of the longer-term variation we observe in the postprison transition to adulthood (Mulvey et al. 2010). Our work therefore also supports research that implicates early reintegration experiences in determining life-course and criminal justice outcomes among the formerly incarcerated.

Finally, we find that blacks are more likely than whites to follow continuing education trajectories relative to transitioning trajectories. This difference is 4 percentage points after preprison and in-prison experiences are controlled and almost 8 percentage points after postprison experiences are also controlled. This finding indicates that further education is a particularly salient pathway to adulthood for black young men recently released from prison. One interpretation is that young black men with a criminal record have such dismal prospects for upward mobility in the labor market that they turn to higher education to improve their job skills. This would be consistent with Karl Alexander, Doris Entwisle, and Linda Olson’s more general argument that working-class white young adults are able to leverage social networks to gain access to good paying jobs in the skilled trades that do not require a college education, but working-class young blacks are not, prompting them to turn to post-secondary education (2014).

Although we control for most formal contact the young men have with the criminal justice system before prison, their pre-prison life-

course conditions, in-prison experiences, postprison social context, and early postprison outcomes, we are unable to account for a substantial proportion of the racial inequality we observe in the postprison transition to adulthood. Large and statistically significant residual racial differences remain in three of our four trajectory group comparisons. One possible explanation is that unobserved differences by race in our subjects’ early life experiences are important ones. The processes of what we might call selection into prison are quite different by race, as evidenced by large racial differences in rates of imprisonment. Our sample is selected based on imprisonment at an early age, and whites who experience imprisonment at an early age may be very different from blacks who do so. Such differences might account for blacks’ greater residual likelihood of continuing education and lower residual likelihood of following disconnected rather than transitioning trajectories.

In addition, we see two possible explanations for blacks’ greater likelihood of following persisting rather than transitioning trajectories: stigma, combined with discrimination, and social network support. The impact of the stigma of a criminal record has been extensively studied, particularly for employment outcomes (Petersilia 2003; Pager, Western, and Bonikowski 2009; Pager 2003; Pager 2007; Ugen et al. 2014). In her in-person audit study, Devah Pager finds that criminal record stigma differentially affects black men relative to white men in terms of their employment prospects (2003). Five percent of black men with a criminal record received callbacks, whereas 17 percent of their white counterparts did, a difference of 12 percentage points. In a subsequent in-person audit study focused on isolating the impact of racial discrimination, independent of the stigma of a criminal record, Pager, Bart Bonikowski, and Bruce Western find that black men received a callback or a job offer 15.2 percent of the time, whereas white men were hired or called back 31.0 percent of the time, a difference of 15.8 percentage points (2009). They also find that black men were often channeled into lower prestige and visibility jobs (such as a busboy rather than a server). Thus, even when blacks are hired, racial discrimination is impli-

cated in relegating them to more precarious work with lower wages.

Racial discrimination and the stigma of a criminal record seem to be linked. In subsequent work on specific industries, Pager finds that restaurants, which tend not to do background checks, are most likely to hire whites with criminal records but least likely to hire blacks with criminal records (2007). In a correspondence audit study, Amanda Agan and Sonja Starr find that the white-black differential in callbacks grew by 36 percentage points (from 7 percent to 43 percent) after the passage of ban-the-box legislation (2018). Together, these research findings suggest discrimination in the labor market against blacks in general, which may be in part due to employers associating race with a criminal record when they lack information to the contrary. Similar patterns of racial discrimination and criminal record stigma have been observed in housing markets (see, for example, Page 1995; Pager and Shepherd 2008; Ewens, Tomlin, and Wang 2014). The combination of discrimination and stigma may therefore account for racial inequality in post-prison outcomes among young adults.

Estimates of the impact of racial discrimination and the stigma of a criminal record on employment are large. A 50 percent differential appears to be the floor (Pager 2007; Pager and Shepherd 2008). In fact, the magnitude of pre-

viously estimated effects of racial discrimination and the stigma of a criminal record on employment, which range from 12 to 15 percentage points, exceed the remaining unexplained racial inequality in our transition to adulthood outcomes, which range from 7 to 11 percentage points. Thus, it is not unreasonable to attribute the residual to some combination of these two factors. However, further research is needed to provide direct evidence of the degree to which criminal record stigma and racial discrimination account for racial inequality in transition to adulthood outcomes.

A final explanation for residual racial inequality is differences in social network support, particularly in the labor market. Deirdre Royster finds that whites are able to monopolize better paying working-class jobs in industries like construction through the use of social networks for hiring and securing apprenticeships (2003). Sandra Smith finds that blacks are less likely to provide job referrals and references to friends, neighbors, and family members (2007). These arguments are also consistent with the racialized trajectories into the labor market among young adults that Alexander and his colleagues identify (2014). Future research should investigate the role of social network support in integration into the labor market following prison release among young blacks and whites.

**Table A1.** Average Characteristics of Postprison Group Members by Race

Covariate	Unsettled		Persisting			
	Black Mean	White Mean	Black Mean	White Mean		
First arrest age	14.66	14.59	14.98	14.52		
Juvenile commitment	0.52	0.55	0.54	0.60		
Number arrests	3.34	3.48	3.41	3.85		
Number probation	0.82	0.74	0.76	0.89		
Number custody	2.30	2.68	*	2.13	2.75	*
Prison enter age	20.77	20.76	20.73	20.28		
Has dependent	0.48	0.32	*	0.50	0.28	*
Ever married	0.04	0.05		0.03	0.04	
High school graduate	0.09	0.09		0.05	0.03	
Earned GED	0.20	0.40	*	0.27	0.39	*
Employed	0.66	0.76	*	0.60	0.71	
Lived independent	0.38	0.31		0.25	0.27	
Mentally ill	0.11	0.28	*	0.13	0.36	*
Daily alcohol use	0.13	0.22	*	0.08	0.20	*
Daily marijuana use	0.37	0.34		0.30	0.43	*
Daily stimulant use	0.09	0.13		0.08	0.14	
Daily depressant use	0.03	0.04		0.02	0.07	*
Months in prison	24.79	18.92	*	22.54	25.97	
Earned GED in prison	0.32	0.32		0.24	0.45	*
Had misconduct	0.70	0.58	*	0.68	0.68	
Days in solitary	17.96	5.67		10.24	44.58	*
Days in Detroit	90.95	9.89	*	94.21	3.49	*
Tract disadvantage	1.30	-0.18	*	1.39	-0.24	*
Tract affluence	-0.43	-0.42		-0.33	-0.40	
County crime rate	7.18	4.94	*	7.67	5.11	*
Electronic monitoring	0.36	0.47	*	0.27	0.38	
Number parole violations	1.44	1.59		1.38	1.57	
Number arrests	0.73	0.69		0.88	0.90	
Days held in custody	61.84	75.90		78.61	96.23	
Continued education	0.04	0.05		0.06	0.03	
Employed	0.41	0.56	*	0.27	0.48	*
Wages	\$783	\$1,361	*	\$619	\$1,306	*
Days lived independent	81.85	51.99	*	62.19	60.33	
Percent positive tests	0.11	0.11		0.22	0.08	*
Days treatment	3.20	8.75	*	3.65	9.21	*

Source: Authors' calculations based on data from MDOC, MSP, MUI, MWDA, NSC, and USC.

\* indicates a statistically significant (at  $p \leq .05$ ) difference between the black and white means.

Disconnected		Transitioning		Continuing Education				
Black Mean	White Mean	Black Mean	White Mean	Black Mean	White Mean			
16.48	15.86	*	16.17	16.08	15.72	15.48		
0.27	0.40	*	0.29	0.34	0.43	0.46		
2.44	2.99	*	2.88	3.25	3.22	3.17		
0.80	0.81		0.80	0.90	0.74	0.67		
1.77	2.25	*	2.12	2.35	2.15	2.31		
21.33	20.82	*	21.22	20.80	20.43	20.94		
0.50	0.34	*	0.50	0.37	*	0.44	0.23	*
0.07	0.06		0.05	0.05		0.04	0.13	
0.10	0.05		0.12	0.08		0.17	0.21	
0.13	0.34	*	0.22	0.41	*	0.22	0.38	
0.60	0.65		0.76	0.84		0.65	0.77	
0.30	0.32		0.36	0.44		0.39	0.33	
0.02	0.31	*	0.08	0.23	*	0.07	0.38	*
0.03	0.09		0.08	0.08		0.06	0.06	
0.20	0.17		0.17	0.18		0.24	0.27	
0.05	0.06		0.02	0.03		0.02	0.08	
0.01	0.02		0.00	0.02		0.00	0.06	
22.62	20.87		26.00	20.79	*	26.32	19.29	
0.19	0.36	*	0.27	0.34		0.37	0.35	
0.65	0.54		0.62	0.53		0.59	0.42	
7.35	8.02		4.45	6.40		12.98	2.06	
131.11	5.77	*	139.23	9.61	*	71.22	1.06	*
1.64	-0.17	*	1.27	-0.26	*	0.92	-0.23	*
-0.41	-0.37		-0.35	-0.41		-0.18	-0.24	
7.47	5.02	*	7.62	5.05	*	6.64	4.25	*
0.27	0.39	*	0.25	0.38	*	0.30	0.35	
0.78	0.99		0.52	0.78	*	1.20	0.88	
0.38	0.27		0.24	0.29		0.44	0.40	
20.19	20.39		16.20	21.11		33.91	33.33	
0.03	0.06		0.07	0.06		0.19	0.31	
0.34	0.57	*	0.65	0.81	*	0.59	0.71	
\$772	\$1,427	*	\$1,799	\$3,333	*	\$1,480	\$2,380	
81.44	105.50		123.50	129.00		97.80	68.42	
0.11	0.08		0.10	0.07		0.09	0.04	
7.01	7.49		5.77	7.72		2.09	8.73	*

**Table A2.** Fully Specified Multinomial Logit Model, Odds Ratios Reported

	Unsettled	Persisting	Disconnected	Continuing Education
White	0.532	0.328	0.814	0.177
	-2.336	-3.908	-0.719	-4.855
First arrest age	0.828	0.898	0.981	0.997
	-4.142	-2.064	-0.400	-0.043
Committed as juvenile	1.274	1.544	0.963	1.551
	1.098	1.868	-0.163	1.477
Number prior arrests	0.952	1.104	0.898	1.031
	-0.773	1.397	-1.637	0.345
Number prior probation convictions	0.917	0.958	1.036	0.864
	-0.795	-0.371	0.304	-0.873
Number prior custody convictions	1.121	0.990	0.942	1.045
	1.317	-0.099	-0.644	0.356
Age entered prison	1.037	0.946	1.179	0.969
	0.554	-0.770	2.518	-0.363
Has one or more dependents	0.803	0.886	0.886	0.759
	-1.104	-0.562	-0.591	-0.989
Ever married	1.337	1.177	1.962	2.672
	0.587	0.296	1.511	1.701
Finished high school	1.860	1.069	0.712	6.457
	1.773	0.146	-0.886	3.840
Earned GED	0.959	1.193	0.538	3.151
	-0.169	0.640	-2.416	2.748
Employed prior	1.021	0.796	0.543	0.595
	0.093	-0.932	-2.728	-1.680
<b>Independence (base = older relative)</b>				
Lived independently	0.874	0.553	0.719	1.082
	-0.685	-2.599	-1.632	0.283
Residential treatment	1.728	2.156	2.052	1.724
	0.580	0.936	1.030	0.594
Jail, prison, or detention center	3.114	2.121	2.020	1.260
	2.233	1.474	1.374	0.308
Homeless or unknown	1.463	0.685	1.423	1.434
	0.693	-0.560	0.620	0.442
Reports mental illness	1.016	1.330	1.085	1.470
	0.067	1.102	0.318	1.190
Daily alcohol use	1.281	0.788	0.594	0.496
	0.758	-0.615	-1.301	-1.295
Daily marijuana use	1.260	1.511	0.864	1.160
	1.033	1.669	-0.582	0.480
Daily stimulant use	3.516	3.311	3.096	2.649
	2.563	2.249	2.064	1.531
Daily depressant use	1.729	2.073	1.017	1.244
	0.799	0.946	0.019	0.266
Months in prison	1.002	1.002	1.000	0.991
	0.321	0.234	0.011	-0.989
Earned GED in prison	1.170	1.267	0.751	4.626
	0.607	0.833	-1.083	3.515

**Table A2.** (continued)

	Unsettled	Persisting	Disconnected	Continuing Education
Misconduct in prison	1.195	1.150	1.144	0.608
	0.838	0.577	0.597	-1.698
Days in solitary confinement	1.004	1.005	1.003	1.002
	1.305	1.577	0.845	0.524
Days in Detroit year 1 post	1.000	0.999	0.999	0.999
	0.180	-0.832	-1.163	-0.810
Tract disadvantage score year 1 post	1.164	1.280	1.240	1.028
	1.222	1.899	1.670	0.160
Tract affluence score year 1 post	1.063	1.418	1.156	1.575
	0.359	1.959	0.823	2.108
County crimes per 1,000 year 1 post	0.991	1.023	0.995	0.883
	-0.221	0.468	-0.111	-1.930
Electronic monitoring year 1 post	1.659	1.137	1.127	0.758
	2.586	0.584	0.587	-0.981
Number parole violations year 1 post	1.381	1.293	1.117	1.207
	3.979	2.827	1.265	1.590
Number arrests year 1 post	1.356	1.619	1.075	1.392
	2.064	3.126	0.432	1.544
Days in custody year 1 post	1.003	1.005	0.996	0.999
	1.919	3.069	-2.037	-0.443
Continued education year 1 post	0.641	1.038	0.672	6.301
	-1.115	0.086	-0.993	5.145
Employed year 1 post	0.695	0.418	0.556	0.824
	-1.530	-3.426	-2.328	-0.604
Earnings year 1 post	1.000	1.000	1.000	1.000
	-3.048	-1.380	-3.301	-1.085
Days independent year 1 post	0.997	0.998	0.998	0.997
	-3.486	-2.544	-2.082	-2.561
Positives per test year 1 post	1.022	2.075	0.548	0.390
	0.050	1.609	-1.212	-1.394
Days in treatment year 1 post	0.991	0.997	0.997	0.995
	-2.029	-0.828	-0.722	-1.149
Observations	1276	1276	1276	1276

Source: Authors' calculations based on data from MDOC, MSP, MUI, MWDA, NSC, and USC.

Note: t-statistics shown below coefficients.

## REFERENCES

- Agan, Amanda Y., and Sonja B. Starr. 2018. "Ban the Box, Criminal Records, and Statistical Discrimination: A Field Experiment." *Quarterly Journal of Economics* 133(1): 191–235.
- Alexander, Karl L., Doris. R. Entwisle, and Linda S. Olson. 2014. *The Long Shadow: Family Background, Disadvantaged Urban Youth and the Transition to Adulthood*. New York: Russell Sage Foundation.
- Arnett, Jeffrey Jensen. 2000. "Emerging Adulthood: A Theory of Development from the Late Teens through the Early Twenties." *American Psychologist* 55(5): 469–80.
- . 2005. "The Developmental Context of Substance Use in Emerging Adulthood." *Journal of Drug Issues* 35(2): 235–53.
- Bernberg, Jon Gunnar, and Marvin Krohn. 2003. "Labeling, Life Chances, and Adult Crime: The Direct and Indirect Effects of Official Intervention in Adolescence on Crime in Early Adulthood." *Criminology* 41(4): 1287–318.
- Bonczar, Thomas P. 2003. *Prevalence of Imprisonment in the US Population, 1974–2001*. Washington: Bureau of Justice Statistics.
- Bradley, Katharine H., R. B. Michael Oliver, Noel C. Richardson, and Elspeth M. Slayter. 2001. "No Place Like Home: Housing and the Ex-Prisoner." Policy Brief. Boston, Mass.: Community Resources for Justice.
- Brame, Robert, Shawn D. Bushway, Ray Paternoster, and Michael G. Turner. 2014. "Demographic Patterns of Cumulative Arrest Prevalence by Ages 18 and 23." *Crime and Delinquency* 60(3): 471–86.
- Brame, Robert, Michael G. Turner, Ray Paternoster, and Shawn D. Bushway. 2012. "Cumulative Prevalence of Arrest from Ages 8 to 23 in a National Sample." *Pediatrics* 129(1): 21–27.
- Bronson, Jennifer, Jessica Stroop, Stephanie Zimmer, and Marcus Berzofsky. 2017. *Drug Use, Dependence, and Abuse Among State Prisoners and Jail Inmates, 2007–2009*. NCJ 250546. Washington: Bureau of Justice Statistics.
- Bushway, Shawn D., and Anne M. Piehl. 2007. "Social Science Research and the Legal Threat to Presumptive Sentencing Guidelines." *Criminology and Public Policy* 6(3): 461–82.
- Cadora, Eric, Mannix Gordon, and Charles Swartz. 2003. "Criminal Justice and Health and Human Services: An Exploration of Overlapping Needs, Resources, and Interests in Brooklyn Neighborhoods." In *Prisoners Once Removed: The Impact of Incarceration and Reentry on Children, Families, and Communities*, edited by Waul Travis. Washington, D.C.: Urban Institute Press.
- Clear, Todd. 2007. *Imprisoning Communities*. New York: Oxford University Press.
- Cloward, Richard A., and Lloyd E. Ohlin. 1960. *Delinquency and Opportunity: A Theory of Delinquent Gangs*. New York: Free Press.
- Comfort, Megan. 2012. "It Was Basically College to Us: Poverty, Prison, and Emerging Adulthood." *Journal of Poverty* 16(3): 308–22.
- Danziger, Sheldon, and Cecilia Elena Rouse. 2007. "Introduction: The Price of Independence: The Economics of Early Adulthood." In *The Price of Independence: The Economics of Early Adulthood*, edited by Sheldon Danziger and Cecilia Elena Rouse. New York: Russell Sage Foundation.
- Desmond, Matthew. 2012. "Disposable Ties and the Urban Poor." *American Journal of Sociology* 117(5): 1295–335.
- Elder, Glen H., Jr. 1988. "The Life Course as Developmental Theory." *Child Development* 69(1): 1–12.
- Ewens, Michael, Bryan Tomlin, and Liang Choon Wang. 2014. "Statistical Discrimination or Prejudice? A Large Sample Field Experiment." *Review of Economics and Statistics* 96(1): 119–34.
- Ewert, Stephanie, and Tara Wildhagen. 2011. "Educational Characteristics of Prisoners: Data from the ACS." Paper presented to the Annual Meeting of the Population Association of America. Washington (March 31).
- Farabee, David, Michael Prendergast, and M. Douglas Anglin. 1998. "The Effectiveness of Coerced Treatment for Drug-Abusing Offenders." *Federal Probation* 62(1): 3–10.
- Frase, Robert S. 2009. "What Explains Persistent Racial Disproportionality in Minnesota's Prison and Jail Populations?" *Crime and Justice* 38(1): 201–80.
- Freisthler, Bridget, Elizabeth A. Lascala, Paul J. Gruenewald, and Andrew J. Trepo. 2005. "An Examination of Drug Activity: Effects of Neighborhood Social Organization on the Development of Drug Distribution Systems." *Substance Use and Misuse* 40(5): 671–86.
- Furstenberg, Frank F. 2006. "Diverging Development: The Not-So-Invisible Hand of Social Class in the United States." *MacArthur Network on Transitions to Adulthood* working paper. Philadelphia: University of Pennsylvania.

- Gendreau, Paul, Claire E. Goggin, and Moira A. Law. 1997. "Predicting Prison Misconducts." *Criminal Justice and Behavior* 24(4): 414–31.
- Goetting, Ann, and Roy Michael Howsen. 1986. "Correlates of Prisoner Misconduct." *Journal of Quantitative Criminology* 2(1): 49–67.
- Haney, Craig. 2003. "Mental Health Issues in Long-Term Solitary and 'Supermax' Confinement." *Crime and Delinquency* 49(1): 124–56.
- Harding, David J., Jessica J.B. Wyse, Cheyney C, Dobson, and Jeffrey D. Morenoff. 2014. "Making Ends Meet After Prison." *Journal of Policy Analysis and Management* 33(2): 440–70.
- . 2017. "Narrative Change, Narrative Stability and Structural Constraint: The Case of Prisoner Reentry Narratives." *American Journal of Cultural Sociology* 5(1): 261–304.
- Harer, Miles D., and Darrell J. Steffensmeier. 1996. "Race and Prison Violence." *Criminology* 34(3): 323–55.
- Harris, Casey T., Darrell Steffensmeier, Jeffrey T. Ulmer, and Noah Painter-Davis. 2009. "Are Blacks and Hispanics Disproportionately Incarcerated Relative to Their Arrests? Racial and Ethnic Disproportionality Between Arrest and Incarceration." *Race and Social Problems* 1(4): 187–99.
- Hart, Carl. 2013. *High Price: A Neuroscientist's Journey of Self-Discovery that Challenges Everything You Know About Drugs and Society*. New York: Harper Collins.
- Hill, Terrence D., and Ronald J. Angel. 2005. "Neighborhood Disorder, Psychological Distress, and Heavy Drinking." *Social Science and Medicine* 61(5): 965–75.
- Hipp, John R., Joan Petersilia, and Susan Turner. 2010. "Parolee Recidivism in California: The Effect of Neighborhood Context and Social Service Agency Characteristics." *Criminology* 48(4): 947–79.
- Hogan, Dennis P., and Nan Marie Astone. 1986. "The Transition to Adulthood." *Annual Review of Sociology* 12: 109–30.
- Holzer, Harry J., Paul Offner, and Elaine Sorensen. 2005. "Declining Employment Among Young Black Less-Educated Men: The Role of Incarceration and Child Support." *Journal of Policy Analysis and Management* 24(2): 329–50.
- James, Doris J., and Lauren E. Glaze. 2006. "Mental Health Problems of Prison and Jail Inmates." Bureau of Justice Statistics special report no. NCJ 213600. Washington: U.S. Department of Justice, Office of Justice Programs.
- Kerckhoff, Alan C. 1993. *Diverging Pathways: Social Structure and Career Deflections*. New York: Cambridge University Press.
- Kirk, David S., and Robert J. Sampson. 2013. "Juvenile Arrest and Collateral Educational Damage in the Transition to Adulthood." *Sociology of Education* 86(1): 36–62.
- Krivo, Lauren J., and Ruth D. Peterson. 1996. "Extremely Disadvantaged Neighborhoods and Urban Crime." *Social Forces* 75(2): 619–48.
- Kubrin, Charis E., and Eric A. Stewart. 2006. "Predicting Who Reoffends: The Neglected Role of Neighborhood Context in Recidivism Studies." *Criminology* 44(1): 165–97.
- LaFree, Gary, Eric P. Baumer, and Robert M. O'Brien. 2010. "Still Separate and Unequal? A City-Level Analysis of the Black-White Gap in Homicide Arrests Since 1960." *American Sociological Review* 75(1): 75–100.
- Laub, John H., and Robert J. Sampson. 2001. "Understanding Desistance from Crime." In *Crime and Justice: A Review of Research*, vol. 28, edited by Michael Tonry. Chicago: University of Chicago Press.
- Lee, Keun Bok, David J. Harding, and Jeffrey D. Morenoff. 2017. "Trajectories of Neighborhood Attainment After Prison." *Social Science Research* 66 (August): 211–33.
- Lutze, Faith E., Jeffrey W. Rosky, and Zachary K. Hamilton. 2013. "Homelessness and Reentry: A Multisite Outcome Evaluation of Washington State's Reentry Housing Program for High Risk Offenders." *Criminal Justice and Behavior*. 41(4): 471–91.
- Lynch, James P., and William J. Sabol. 2004. "Assessing the Effects of Mass Incarceration on Informal Social Control in Communities." *Criminology and Public Policy* 3(2): 267–94.
- MacKinnon, David P., Jennifer L. Krull, and Chondra M. Lockwood. 2000. "Equivalence of the Mediation, Confounding, and Suppression Effect." *Prevention Science* 1(4): 173–86.
- Massoglia, Michael, Glenn Firebaugh, and Cody Warner. 2013. "Racial Variation in the Effect of Incarceration on Neighborhood Attainment." *American Sociological Review* 78(1): 142–65.
- Meade, Benjamin, Benjamin Steiner, Matthew Makarios, and Lawrence Travis. 2013. "Estimating a Dose-Response Relationship Between Time

- Served in Prison and Recidivism." *Journal of Research in Crime and Delinquency* 50(4): 525–50.
- Mears, Daniel P., Xia Wang, Carter Hay, and William D. Bales. 2008. "Social Ecology and Recidivism: Implications for Prisoner Reentry." *Criminology* 46(2): 301–40.
- Mears, Daniel P., Joshua C. Cochran, William D. Bales, and Avinash Bhati. 2016. "Recidivism and Time Served in Prison." *Journal of Criminal Law and Criminology* 106(1): 81–122.
- Mood, Carina. 2010. "Logistic Regression: Why We Cannot Do What We Think We Can Do, and What We Can Do About It." *European Sociological Review* 26(1): 67–82.
- Morenoff, Jeffrey D., and David J. Harding, 2001. *Final Technical Report: Neighborhoods, Recidivism, and Employment Among Returning Prisoners*. Washington: U.S. Department of Justice.
- Morris, Robert G. 2016. "Exploring the Effect of Exposure to Short-Term Solitary Confinement Among Violent Prison Inmates." *Journal of Quantitative Criminology* 32(1): 1–22.
- Mouw, Ted. 2000. "Job Relocation and the Racial Gap in Unemployment in Detroit and Chicago, 1980 to 1990." *American Sociological Review* 65(5): 730–53.
- Mulvey, Edward, Laurence Steinberg, Alex R. Piquero, Michelle Besana, Jeffrey Fagan, Carol Schubert, and Elizabeth Cauffman. 2010. "Trajectories of Desistance and Continuity in Antisocial Behavior Following Court Adjudication Among Serious Adolescent Offenders." *Development and Psychopathology* 22(2): 453–75.
- Nagin, Daniel S. 2005. *Group-Based Modeling of Development*. Cambridge, Mass.: Harvard University Press.
- Nagin, Daniel S., Bobby Jones, Valerie Lima Passos, and Richard E. Tremblay. 2016. "Group-Based Multi-Trajectory Modeling." *Statistical Methods in Medical Research* 27(7): 2015–23.
- Nagin, Daniel S., and Kenneth C. Land. 1993. "Age, Criminal Careers, and Population Heterogeneity: Specification and Estimation of a Nonparametric, Mixed Poisson Model." *Criminology* 31(3): 327–62.
- National Research Council. 2007. *Parole, Desistance from Crime, and Community Integration*. Washington, D.C.: The National Academies Press.
- Osgood, D. Wayne, E. Michael Foster, Constance Flanagan, and Gretchen R. Ruth, eds. 2006. *On Your Own Without a Net: The Transition to Adulthood for Vulnerable Populations*. Chicago: University of Chicago Press.
- Page, Marianne. 1995. "Racial and Ethnic Discrimination in Urban Housing Markets: Evidence from a Recent Audit Study." *Journal of Urban Economics* 38(2): 183–206.
- Pager, Devah. 2003. "The Mark of a Criminal Record." *American Journal of Sociology* 108(5): 937–75.
- . 2007. *Marked: Race, Crime, and Finding Work in an Era of Mass Incarceration*. Chicago: University of Chicago Press.
- Pager, Devah, and Hana Shepherd. 2008. "The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets." *Annual Review of Sociology* 34: 181–209.
- Pager, Devah, Bruce Western, and Bart Bonikowski. 2009. "Discrimination in a Low-Wage Labor Market A Field Experiment." *American Sociological Review* 74(5): 777–99.
- Paternoster, Raymond, and Shawn Bushway. 2009. "Desistance and the Feared Self: Toward an Identity Theory of Criminal Desistance." *Journal of Criminal Law and Criminology* 99(4): 1103–56.
- Petersilia, Joan. 2003. *When Prisoners Come Home: Parole and Prisoner Reentry*. Oxford: Oxford University Press.
- Petersilia, Joan, and Susan Turner. 1993. "Intensive Probation and Parole." *Crime and Justice* 17:281–335.
- Pettit, Becky, and Bruce Western. 2004. "Mass Imprisonment and the Life Course: Race and Class Inequality in US Incarceration." *American Sociological Review* 69(2): 151–69.
- Pew Center on the States. 2009. *One in 31: The Long Reach of American Corrections*. Washington, D.C.: Pew Charitable Trusts.
- Raphael, Steven. 2007. "Early Incarceration Spells and the Transition to Adulthood." In *The Price of Independence: The Economics of Early Adulthood*, edited by Sheldon Danziger and Cecilia Rouse. New York: Russell Sage Foundation.
- Raphael, Stephen, and David F. Weiman. 2007. "The Impact of Local Labor Market Conditions on the Likelihood that Parolees are Returned to Custody." In *Barriers to Reentry? The Labor Market for Released Prisoners in Post-Industrial America*, edited by Shawn D. Bushway, Michael S. Stoll,

- and David F. Weiman. New York: Russell Sage Foundation.
- Rehavi, M. Marit, and Sonja B. Starr. 2014. "Racial Disparity in Federal Criminal Sentences." *Journal of Political Economy* 112(6): 1320–54.
- Royster, Deirdre. 2003. *Race and the Invisible Hand: How White Networks Exclude Black Men from Blue Collar Jobs*. Berkeley: University of California Press.
- Sabol, William J. 2007. "Local Labor Market Conditions and Post-Prison Employment Experiences of Offenders Released from Ohio State Prisons." In *Barriers to Reentry? The Labor Market for Released Prisoners in Post-Industrial America*, edited by Shawn D. Bushway, Michael S. Stoll, and David F. Weiman. New York: Russell Sage Foundation.
- Sampson, Robert J., and John H. Laub. 1992. "Crime and Deviance in the Life Course." *Annual Review of Sociology* 18: 63–84.
- . 1993. *Crime in the Making: Pathways and Turning Points Through Life*. Cambridge, Mass.: Harvard University Press.
- . 1997. "A Life-Course Theory of Cumulative Disadvantage and the Stability of Delinquency." In *Developmental Theories of Crime and Delinquency*, edited by Terence Thornberry. New York: Routledge.
- . 2003. "Life-Course Desisters? Trajectories of Crime Among Delinquent Boys Followed to Age 70." *Criminology* 41(3): 555–92.
- . 2005. "A Life-Course View of the Development of Crime." *Annals of the American Academy of Political and Social Science* 602(1): 12–45.
- Sampson, Robert J., Jeffrey D. Morenoff, and Felton Earls. 1999. "Beyond Social Capital: Spatial Dynamics of Collective Efficacy for Children." *American Sociological Review* 64(5): 633–60.
- Sampson, Robert J., Stephen W. Raudenbush, and Felton Earls. 1997. "Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy." *Science* 277(5328): 918–24.
- Schoon, Ingrid. 2015. "Diverse Pathways: Rethinking the Transition to Adulthood." In *Families in an Era of Increasing Inequality*, edited by Paul R. Amato, Alan Booth, Susan M. McHale, and Jennifer Van Hook. New York: Springer.
- Seim, Josh. 2016. "Short-Timing: The Carceral Experience of Soon-to-Be-Released Prisoners." *Punishment and Society* 18(4): 442–58.
- Shanahan, Michael J. 2000. "Pathways to Adulthood in Changing Societies: Variability and Mechanisms in Life Course Perspective." *Annual Review of Sociology* 26: 667–92.
- Smith, Peter Scharff. 2006. "The Effects of Solitary Confinement on Prison Inmates: A Brief History and Review of the Literature." *Crime and Justice* 34(1): 441–528.
- Smith, Sandra S. 2007. *Lone Pursuit: Distrust and Defensive Individualism among the Black Poor*. New York: Russell Sage Foundation.
- Solomon, Amy L., Gillian L. Thomson, and Sinead Keegan. 2004. *Prisoner Reentry in Michigan*. Washington, D.C.: The Urban Institute.
- South, Scott J., Ying Huang, Amy Spring, and Kyle Crowder. 2016. "Neighborhood Attainment over the Adult Life Course." *American Sociological Review* 81(6): 1276–1304.
- Steiner, Benjamin, and Callie M. Cain. 2017. "The Effect of Removing Sentencing Credits on Inmate Misbehavior." *Journal of Quantitative Criminology*. DOI: 10.1007/s10940-017-9372-7.
- Steiner, Benjamin, H. David Butler, and Jared M. Ellison. 2014. "Causes and Correlates of Prison Inmate Misconduct: A Systematic Review of The Evidence." *Journal of Criminal Justice* 42(6): 462–70.
- Sweeten, Gary S. 2012. "Scaling Criminal Offending." *Journal of Quantitative Criminology* 28(3): 533–57.
- Tiedt, Andrew D., and William J. Sabol. 2015. "Sentence Length and Recidivism Among Prisoners Released Across 30 States in 2005: Accounting for Individual Histories and State Clustering Effects." *Justice Research and Policy* 16(1): 50–64.
- Uggen, Christopher. 2000. "Work as a Turning Point in the Life Course of Criminals: A Duration Model of Age, Employment, and Recidivism." *American Sociological Review* 67(4): 529–46.
- Uggen, Christopher, Mike Vuolo, Sarah Lageson, Ebony Ruhland, and Hilary Whitham. 2014. "The Edge of Stigma: An Experimental Audit of the Effects of Low-Level Criminal Records on Employment." *Criminology* 52(4): 627–54.
- Visher, Christy A. 1991. *A Comparison of Urinalysis Technologies for Drug Testing in Criminal Justice*. NCJ 132397. Washington, D.C.: National Institute of Justice.
- Visher, Christy A., and Jeremy Travis. 2003. "Transi-

- tions from Prison to Community: Understanding Individual Pathways." *Annual Review of Sociology* 29: 89–113.
- Warner, Cody. 2014. "The Effect of Incarceration on Residential Mobility Between Poor and Non-Poor Neighborhoods." Paper presented at the Annual Meetings of the American Sociological Association. San Francisco (August 16–19).
- Waters, Mary C., Patrick J. Carr, Maria J. Kefalas, and Jennifer Holdaway, eds. 2011. *Coming of Age in America: The Transition to Adulthood in the Twenty-First Century*. Berkeley: University of California Press.
- Western, Bruce. 2006. *Punishment and Inequality in America*. New York: Russell Sage Foundation.
- Western, Bruce, and Becky Pettit. 2005. "Black-white wage inequality, employment rates, and incarceration." *American Journal of Sociology* 111(2): 553–78.
- Western, Bruce, Anthony A. Braga, Jaclyn Davis, and Catherine Sirois. 2015. "Stress and Hardship After Prison." *American Journal of Sociology* 120(5): 1512–47.
- Wilson, William J. 1987. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago: University of Chicago Press.
- Young, Alford. 2004. *The Minds of Marginalized Black Men: Making Sense of Mobility, Opportunity, and Future Life Chances*. Princeton, N.J.: Princeton University Press.
- Zatz, Marjorie S. 2000. "The Convergence of Race, Ethnicity, Gender, and Class on Court Decision-Making: Looking Toward the 21st Century." *Criminal Justice* 3(1): 503–52.