The Neighborhood Context of Prisoner Reentry

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September 22, 2008
(revised March 30, 2009)

Abstract: Over the last two decades, the number of individuals incarcerated in prisons and jails in the United States has risen dramatically, from 0.2% of all US residents in 1980 to 0.7% of US residents in 2000. As a result, over 600,000 prisoners are released each year. Yet there has been almost no research on how often released prisoners move, the fluidity of their living arrangements, or the factors that predict which returning prisoners are more likely to secure stable living arrangements, avoid disadvantaged neighborhoods, and experience "upward" residential mobility over time. We are in the process of assembling a unique dataset that contains prospective longitudinal administrative records on returning prisoners who were released onto parole in Michigan in 2003. Two theoretical perspectives suggest hypotheses about the determinants of neighborhood environments among former prisoners. One perspective emphasizes individual markers of disadvantage, such as race and education, and suggests that minorities and those with low levels of education will be disproportionately concentrated in the most disadvantaged communities after release. A second theoretical perspective emphasizes social ties and their relation to social capital and social control, and suggests that former prisoners with more spells of incarceration and longer commitments will be most likely to live in disadvantaged neighborhoods and experience the greatest residential instability. The analysis presented in this paper models the characteristics of the first neighborhood to which parolees move after release. Our preliminary results reveal striking racial disparities in the level of neighborhood disadvantage that returning parolees encounter and provide initial support for both neighborhood attainment and social capital theories of residential mobility in this population.

Paper prepared for submission for the 2009 Annual Meeting of the Population Association of America. Contact the authors at morenoff@umich.edu, dharding@umich.edu, cooterab@umich.edu. This research was funded by the University of Michigan Center for Local, State, and Urban Policy, the National Poverty Center at the University of Michigan, and the Russell Sage Foundation. We thank Paulette Hatchett, our collaborator at the Michigan Department of Corrections, for access to the data and for advice on the research design, and we thank Steve Heeringa and Zeina Mneimneh for advice on the sample design. Brenda Hurless, Bianca Espinoza, Jane Rochmes, Jon Tshiamala, Katie Harwood, Elizabeth Sinclair, Joanna Wu, Clara Rucker, Michelle Hartzog, and Tyrell Connor, Elena Kaltsas, and Elizabeth Johnston provided excellent research assistance.

Over the last two decades, the number of individuals incarcerated in prisons and jails in the United States has risen dramatically, from 0.2% of all US residents in 1980 to 0.7% of US residents in 2000 (Western 2006). Whereas in 1975 the population in jails and prisons on any given day was roughly 400,000 people, by 2003 this number had increased more than fivefold to 2.1 million people (Western 2006). As a result, over 600,000 prisoners are released each year (Visher and Travis 2003). Released prisoners are disadvantaged educationally, economically, and socially, and incarceration has been linked to increasing inequality in the US (Pager 2003; Western 2006). The large number of individuals exiting prison every year represents an important demographic phenomenon that has received relatively little attention from researchers, despite renewed interest among policy makers in integrating former prisoners back into society (Visher and Travis 2003).

Very little is known about where people live when they leave prison, although there is evidence that many ex-prisoners return to very disadvantaged neighborhood environments (Cadora, Swartz, and Gordon 2003; Lynch and Sabol 2004; Solomon and Thomson 2004). Neighborhoods with high unemployment, poverty and crime rates are likely to have fewer resources that address the health and economic needs of returning prisoners, exert lower levels of social control over former prisoners, and present former prisoners with greater opportunities to return to crime and substance use. Still, there has been almost no research on how often released prisoners move, the fluidity of their living arrangements, or the factors that predict which returning prisoners are more likely to secure stable living arrangements, avoid disadvantaged neighborhoods, and experience "upward" residential mobility over time. Perhaps the primary reason for the lack of research on former prisoners is the difficulty of obtaining appropriate data. On the one hand, large-scale social surveys often exclude the "institutionalized population" or

contain few measures of involvement with the criminal justice system. On the other hand, criminal justice data rarely include information on the social and economic background of individuals, characteristics of their social contexts, or measures that track the health and well-being of individuals over time.

For this paper we have assembled a unique dataset that contains administrative records on returning prisoners who were released onto parole in Michigan in 2003. We are in the process of collecting data on all of the addresses where a one-third sample (n = 3,689) of these parolees lived during the time they were on parole, contextual data on the areas associated with those addresses, and a rich set of control variables including sociodemographic characteristics of the sample members as well as measures of their criminal history and conditions of their confinement. This paper focuses on the first neighborhood to which these parolees moved after prison and uses data from the entire population of former prisoners paroled in 2003 in Michigan (n = 11,064).

Our analysis focuses on the social and institutional processes that sort parolees into different neighborhood environments. We explore two hypotheses about racial/ethnic and socioeconomic disparities among returning parolees in the types of neighborhood environments they face and their trajectories of mobility. This research fills an important gap in the literatures on residential mobility, neighborhood attainment, and prisoner reentry, which have largely ignored the neighborhood contexts of the returning prisoner population, a particularly disadvantaged and vulnerable group.

The Demography of Prisoner Reentry

As a consequence of the dramatic rise in incarceration in the United States during the last 30 years, many communities are now grappling with the problem of reintegrating former prisoners. Roughly 600,000 people are released each year from state and federal prisons in the U.S., and about 80 percent of them are released on parole (e.g., National Research Council 2007). Incarceration is disproportionately experienced by young, low skill, African-American men, and has important consequences for their well-being. For example, declining labor force participation by young black men during the late 1990s, when a strong economy pulled other low-skill workers into the labor market, has been attributed to incarceration and its effects (Holzer, Offner, and Sorensen 2005). Incarceration also increases the likelihood of experiencing severe heath limitations (Schnittker and John 2007), and mortality rates are particularly high in the weeks following release from prison (Binswanger et al. 2007; National Research Council 2007). Previous research has demonstrated that the steady flow of people into and out of prisons has played a role in increasing inequality in recent decades, primarily by reducing opportunities for employment and lowering wages (Western 2006). Successful reentry is challenged by barriers facing former prisoners in housing, employment, and access to services and by former prisoners' disadvantaged positions with regard to education, work experience, social capital, and mental and physical health (Visher and Travis 2003). Indeed, the prospects for successful reentry are often dim, as the chances of returning to prison within three years range from 50 to 75% percent or greater depending on individual and geographic characteristics (Langhan and Levin 2002).

Research to date on prisoner reentry has focused on four goals: (1) identifying individual-level predictors of recidivism, such as housing instability, substance abuse and other mental

health problems, lack of employment, and low education (National Research Council 2007; Petersilia 2003; Visher and Travis 2003); (2) evaluating the effects of intervention programs on desistance from crime (Cullen 2002); (3) documenting the effect of incarceration on employment, wages, and family structure (National Research Council 2007; Patillo, Weiman, and Western 2004; Pettit and Lyons 2007; Raphael Forthcoming; Western 2006); and (4) demonstrating the contribution of incarceration to rising inequality in the United States (Patillo, Weiman, and Western 2004; Western 2006).

Identifying which characteristics of former prisoners predict recidivism is only the first step toward understanding the mechanisms by which such characteristics are connected to the social and economic outcomes of former prisoners, such as neighborhood attainment or employment. We know that former prisoners are stigmatized in the labor market (Pager 2003) and that incarceration often disrupts ties to family members, romantic partners, and children (Braman 2004). Yet much remains to be learned about the demography of prisoner reentry. We know little about how some ex-offenders are able to secure stable housing and employment while others quickly succumb to drug addiction or return to crime, information that is critical to understanding how and why incarceration has its effects. In particular, little attention has been paid to the impact of social contexts on the outcomes of released prisoners. A recent report from the National Research Council (2007) assessing research on factors that promote desistance from crime and community integration among returning parolees concludes that two of the most important outstanding questions are how communities affect the outcomes of former prisoners and how parolees in turn affect the communities they reenter.

Perhaps the primary reason for the lack of research on prisoner reentry is the difficulty in obtaining appropriate data. Prior research on the outcomes of released prisoners has been limited

by the available data, often relying on data on participants in the demonstration projects of the 1970s and 1980s such as the Texas and Georgia Transitional Aid Research Project (Berk, Lenihan, and Rossi 1980; Needels 1996), data from evaluations of particular programs (Benda and Toombs 2002), or data from narrow subgroups of former prisoners, such as Texas property offenders (Joo, Ekland-Olson, and Kelley 1995; Kelley and Ekland-Olson 1991). On the one hand, large scale social surveys often exclude the "institutionalized population" or contain few measures of involvement with the criminal justice system. On the other hand, criminal justice data rarely include information on social factors such as employment and neighborhoods, precluding analysis of demographic and economic outcomes or the role of social contexts in structuring them. To our knowledge, there has been only one prior study that has collected data on a sample of incarcerated individuals and followed these subjects during the reentry process (Visher, La Vigne, and Travis 2004). In this survey-based study, researchers selected samples of inmates in four cities (Chicago, Cleveland, Houston, and Baltimore) and interviewed these subjects once in prison and up to twice again following release. This study was limited to two years of follow-up and had an attrition rate of almost 50% (La Vigne and Parthasarathy 2005).

Parole and Residential Mobility

Nationwide, about 80% of released prisoners are released on parole supervision, which is largely geared towards preventing recidivism (National Research Council 2007). Parolees are subject to many conditions of supervision, typically including weekly or monthly visits to their parole officer, regular drug and alcohol tests, keeping one's parole agent informed of one's address, working or actively looking for work, attending drug or alcohol treatment programs, curfews, limits on contact with other ex-offenders, and not owning or possessing a weapon.

Certain classes of parolees have additional conditions, such as restrictions on residential location or contact with children for sex offenders, prohibitions on owning a cell phone for former drug dealers, or prohibitions on driving for those convicted of drunken driving. Some parolees are also subject to "electronic monitoring," in which they wear an ankle bracelet that measures either blood alcohol content or whether they are at home during certain hours and transmits this data back to the parole officer through a phone modem.

In Michigan, as in other states, parolees' living arrangements are closely monitored by parole agents, who must approve any new residence. The address where a parolee plans to live after release is visited by a parole officer for evaluation and approval (for the typical parolee, concerns are firearms in the home, evidence of drug use in the home, other convicted felons residing at the address, and whether the address is a real address). No parolee is released without a planned place to live, so living on the streets immediately following release is extremely rare but may be more common later during the parole period. Few parolees have the financial resources to live alone, and few are married (12% of those paroled in 2003 in Michigan, according to estimates), so most parolees must either live with parents, other family members, or romantic partners. As a result, few parolees return to the exact address where they lived before prison. When living with friends or family is not an option, parolees may be paroled to homeless shelters or residential drug or alcohol treatment centers, which in Michigan may also be required by the parole board for prisoners with a history of drug or alcohol abuse. Parolees are forbidden from moving out of state unless they initiate a lengthy bureaucratic procedure and pay a fee. Moving between counties is allowed but requires prior permission; as such a move would require changing parole offices. Also, convicted felons are prohibited from living in public housing.

Financial and institutional barriers to securing housing may restrict parolees' residential options to the least desirable, most disadvantaged neighborhoods.

Almost nothing is known about the residential trajectories or living arrangements of former prisoners following release. Visher et al. (2004) report that among 147 former prisoners from Baltimore, 19% lived in their own home, 69% lived in someone else's home, and 10% lived in a residential treatment center at a one-year post-release follow-up interview. Previous research has shown high rates of homelessness among former prisoners (Metraux and Culhane 2004; Roman and Travis 2006), but otherwise basic descriptive questions – such as how frequently former prisoners move, how long it takes the typical former prisoner to achieve housing stability, or which characteristics predict different living arrangements (e.g., living alone, with a spouse, with other family, in a drug treatment center, or in a homeless shelter) – remain unanswered.

Neighborhoods and Desistance

Although scholars have hypothesized that neighborhood is a key social context for returning prisoners (National Research Council 2007), there have been only two prior studies linking social contextual factors to the risk of recidivism. In one of these studies, Kubrin and Stewart (2006) find that tract-level concentrated disadvantage predicts recidivism in one Oregon county; while in the other Mears and colleagues (2008) analyze administrative data for the entire state of Florida and find that a county-level measure of resource deprivation is associated with being sent back to prison for a violent or drug-related offense. Each of these studies focuses on the social context associated with the first address where a returning prisoner moves after release, and there are no studies, of which we are aware, that shed any light into how

residentially mobile returning prisoners are, what kinds of moves they are likely to experience, or whether changes in neighborhood context are themselves associated with outcomes such as recidivism and employment.

Our theoretical motivation for studying the neighborhood environments and residential mobility of former prisoners is based on their potential effects on their success of gaining financial stability and desisting from crime. Prior research suggests at least five reasons why neighborhoods may be related to the parolees' prospects for gaining stable employment and desisting from crime. First, disadvantaged neighborhoods tend to exert lower levels of social control over their residents and have higher rates of crime and disorder (Bursik 1993; Sampson, Morenoff, and Raudenbush 2005; Sampson, Raudenbush, and Earls 1997). Second, to the extent that disadvantaged neighborhoods are located in counties or metropolitan areas with higher unemployment rates, returning to such neighborhoods will reduce employment prospects and potentially increase recidivism (Raphael and Weiman 2007; Sabol 2007). Third, residents of disadvantaged neighborhoods, particularly African Americans, are isolated from social networks that might provide information about employment and other forms of support (Smith 2007; Wilson 1987; Young 2004). Fourth, disadvantaged neighborhoods tend to be located far from jobs (Mouw 2000; Wilson 1987; Wilson 1996), making employment more difficult. Finally, neighborhoods with high crime rates provide former prisoners with more opportunities to engage in crime and substance abuse.

As a first step toward understanding whether and how neighborhood environments shape the reintegration prospects of returning prisoners, we need to understand the determinants of where and with whom returning prisoners live. Some evidence suggests that former prisoners are more likely to return to very disadvantaged neighborhood environments (Cadora, Swartz, and

Gordon 2003; Lynch and Sabol 2004; Solomon and Thomson 2004) and to communities where resources and services are already stretched thin and where law enforcement supervision is high (Fagan, West, and Holland 2003). In Michigan, for example, about one-third of released prisoners return to Wayne County, and within Wayne County about two-fifths of returning prisoners return to just eight zip codes in Detroit (Solomon and Thomson 2004).

Neighborhood Attainment of Returning Prisoners

Previous studies of residential mobility and living arrangements among returning prisoners are limited in that they are based on small samples, usually in a single city. Such studies have also focused exclusively on the characteristics of the first neighborhood or first living arrangements where returning prisoners live after their release, and little is known about their residential trajectories beyond that point (Petersilia 2003). Most important, there have been no previous attempts to understand variation within the population of returning prisoners in the neighborhood environments in which they settle or in residential stability. As a result, it is not known whether there are racial/ethnic or socioeconomic disparities – or any other significant individual or group differences – in the process of neighborhood attainment among returning prisoners.

Two theoretical perspectives suggest hypotheses about the determinants of neighborhood environments among former prisoners. One perspective, which we term the neighborhood attainment hypothesis, emphasizes individual markers of disadvantage, such as race and education, and suggests that minorities and those with low levels of education will be disproportionately concentrated in the most disadvantaged communities after release. These hypotheses follow from a long line of demographic research on residential mobility in the

general population, much of which attempts to understand how people end up in the types of neighborhoods they do – the process of "neighborhood attainment" (e.g., Alba and Logan 1993; Massey and Denton 1993; Sampson and Sharkey 2008). This literature focuses on explaining racial/ethnic and socioeconomic disparities in the "quality" of neighborhoods where people live. For example, spatial assimilation theory – developed by Chicago school sociologists to explain changes in neighborhood context as immigrant groups assimilated to American society – argues that as socio-economic status increases, so does access to better housing in white middle class neighborhoods (e.g., Park and Burgess 1924). More recent research has emphasized the role of race and ethnicity, showing that socio-economic differences cannot explain racial differences in neighborhood attainment (Alba and Logan 1993; Alba, Logan, and Stults 2000; Logan and Alba 1993). Remaining racial differences are attributed to housing discrimination (Massey and Denton 1993; Yinger 1995) and the movement of whites out of neighborhoods with growing minority populations (Charles 2003; Massey and Denton 1993).

A second theoretical perspective, which we term the social capital hypothesis, emphasizes social ties and their relation to social capital and social control, and suggests that former prisoners with more spells of incarceration and longer commitments will be most likely to live in disadvantaged neighborhoods and experience the greatest residential instability. More time spent in prison separates prisoners from family and friends (Sampson and Laub 1993: 165), reducing their social capital. Lack of social ties to family and friends may limit their housing options to temporary shelters and residential centers, which are disproportionately concentrated in disadvantaged communities, or lead to greater residential instability as individuals move between various living arrangements. Furthermore, with less social support and fewer resources, only the lowest rent housing in the least desirable neighborhoods will typically be an option.

Conversely, prisoners who return "home" to spouses or parents may have a stable base from which to rebuild their lives. Such former prisoners would likely receive greater emotional, financial, and social support. In addition, social control theory suggests that family members, particularly spouses (Sampson, Laub, and Wimer 2006), will steer former prisoners toward employment and away from substance use and crime, leading to more positive trajectories over time in neighborhood attainment and living arrangements.

Both of these theoretical perspectives also suggest some degree of path dependence in these processes. In other words, initial post-release neighborhood contexts should influence later neighborhood contexts, net of individual pre-prison and demographic characteristics. Living in a more disadvantaged neighborhood immediately after release may lower ones chances of employment and increase one's chances of returning to drug abuse or crime, making economic and spatial mobility less likely. Conversely, an affluent neighborhood may increase access to jobs or job information, launching the former prisoner on a trajectory of employment, residential stability, and continued access to advantaged neighborhoods.

Data and Methods

Census Tract Data

We have constructed tract-level files of census variables for the State of Michigan for 1980, 1990, and 2000. These files include variables measuring demographic composition, unemployment and joblessness, poverty and income, education and occupation, immigration, welfare receipt, family type, residential stability, and home ownership. For each census year, we have conducted a factor analysis of tract-level variables. For 2000, this resulted in five orthogonal factors: (1) "disadvantage," with high loadings on percent black, poverty, single

parents, unemployment, and welfare receipt, (2) "affluence," with high loadings on high education, high income, and professional/managerial occupation, (3) "residential stability," with high loadings on percent living in same household 5 years ago and home ownership, (4) "age structure," with high loadings on percent youth, and (5) "Latino-Foreign Born," with high loadings on foreign born and Latino. The 1980 and 1990 factor analyses produced similar results except there was no Latino-Foreign Born factor in those years, as the Michigan foreign born population was very small before the 1990s. For the analysis in this paper, we constructed parallel scales for disadvantage, affluence, residential mobility, age structure, and Latino-Foreign born by taking the mean of standardized versions of the above variables (since these scales are used as outcomes in separate models, then need not be orthogonal). We also model tract median income, percent poor, and percent black. Finally, based on our administrative data (described below) we constructed a variable that measures the density of parolees per tract by calculating the log of the ratio of the number of parolees to the total tract population.

Individual Parolee Data

Through a collaborative arrangement with the Michigan Department of Corrections (MDOC), we are in the process of compiling a unique data set based on detailed administrative records on a representative sample of parolees released from Michigan prisons in 2003 and followed up to the present.[1] Our data come from the population of parolees who were released from Michigan prisons in 2003 and paroled in Michigan (N = 11,064). This population is 8 percent female, 54 percent black, 45 percent white, and 1 percent other (almost entirely Mexican-American). With regard to age, 19% are less than age 25, 17% are age 26-30, 18% are

[1] Whereas jails are run by local cities and counties and hold individuals with sentences less than one or two years or awaiting trial, prisons are run by the states or the federal government and hold individuals who have longer sentences.

age 31-35, 16% are age 36-40, 14% are age 41-45, 10% are age 46-50, and 6% are 51 or older. Selecting parolees released in 2003 allows us to study a recent cohort of parolees and follow them for at least three years, the typical time window for studies of ex-offenders, and to have confidence that recommitments to prison and parole violations toward the end of this time period have been entered into the MDOC administrative databases.

Our administrative data on parolees come primarily from records from two different MDOC administrative databases: Corrections Management Information Systems (CMIS) and Offender Management Network Information system (OMNI). The administrative records cover a wide but variable length of time for each parolee that includes (a) the prison sentence that ended in 2003 and the subsequent parole period and (b) pre-prison background (e.g., criminal history, last known address), including any spells of incarceration, probation, or parole that the person had in Michigan either prior or subsequent to the sampled spell.

The CMIS database contains records on all prisoners, probationers, and parolees, dating back to 1980, including data on prior criminal history, demographics, last known address prior to incarceration, intended post-prison address, marital status, number of minor children, education, physical characteristics, health care and other services received in prison, recommitments, behavior violations in prison, and MDOC assessments of health, substances use, abuse, and addiction, security level, recidivism risk, and mental health. The OMNI database is used by parole and probation officers to track and record information on individuals under supervision. It includes longitudinal data (updated weekly or monthly throughout the parole period) on residential addresses, employment, drug and alcohol tests, arrests, and parole violations and revocations.

In addition to CMIS and OMNI databases, another valuable source of data is the OMNI case notes that parole agents update regularly on each parolee. We are in the process of extracting from case notes prospective longitudinal data on residential addresses as well as living arrangements and employment histories. All of our variables have been extensively cleaned, which involved checking for duplicated records, multiple people with the same ID number, and logical inconsistencies across variables, as well as detailed reading of the case notes where appropriate to resolve any discrepancies.

Residential Address: All parolees are required to report changes of address to their parole officers, who in turn are supposed to verify this address and record it in the OMNI database. Failure to keep one's parole agent informed of one's address is a parole violation, and parole agents are required to verify residence information provided by parolees, so parolees have a strong incentive to provide address information. Parolees also provide an address to MDOC before their release, and these residences are visited by parole agents for approval prior to the parolee's release and recorded in CMIS. Using these data, we are in the process of assembling residential histories for our sample that include move dates and addresses, which we will then link to census tracts and their characteristics. In addition, MDOC records last address prior to the arrest for the crime for which the parolee was incarcerated, so we are also coding information on pre-prison neighborhoods.

First Post-Release Neighborhood: We began by coding the first residence after release for the entire population of parolees released in 2003 in order to examine their neighborhood locations and characteristics. We defined first addresses as those where an individual stayed for at least one night and had some "community exposure," meaning that he or she had unsupervised access to people and places outside of the residence. Those who were paroled to institutions

offering no exposure to the community, such as hospitals, in-patient treatment centers, or county jails, were assigned the first subsequent non-institutional address. The number of parolees who stayed at their first address for only one night is less than 1%, so we believe our "one-night rule" is reasonable for purposes of determining census tract for sampling. About 15 percent of parolees stayed in a residential substance abuse treatment center immediately following their release. Homeless individuals were assigned the census tract of the shelter or mission where they were staying (no parolees were living on the streets immediately after their release, as a prisoner must have a place to live before being paroled). We then geocoded these addresses to determine the census tract of first residence and matched the census tract data and factor scores to these records. Through careful examination of MDOC administrative records and parole agent narrative case notes, we successfully identified and geocoded the first residential addresses of all but 25 parolees (0.2%).

Figure 1 shows the first residential addresses of parolees released from Michigan Prisons in 2003. This map shows that most of the parolees returned to neighborhoods in Michigan's major metropolitan areas but also reveals significant geographic variation in the reentry communities of Michigan parolees. Thirty-five percent of parolees returned to Wayne County (Detroit and its western suburbs), and 75% of parolees returned to just 9 of Michigan's 84 counties. Many parolees returned to a small set of tracts: 2% of tracts received 25% of parolees, 12% of tracts received 50% of parolees, and 33% of tracts received 75% of parolees. The number of parolees per tract ranges from 1 to 509, with a mean of 5.2 and a standard deviation of 16.4. Yet there is also considerable geographic diversity. Of Michigan's 2,707 census tracts, 78% received at least one parolee in 2003. Not surprisingly, parolees returned disproportionately to disadvantaged tracts. Almost 55% returned to tracts in the highest quintile of our disadvantage

factor. However, there is considerable variation in the tracts to which parolees return. Over 9% returned to tracts in the most advantaged quintile and another 10% returned to tracts in the second most advantaged quintile.

Living Arrangements: For each residence, we are also coding living arrangements based on parole agent case notes. Parole agents record the type of housing and who rents or owns the residence where the parolee lives. This will allow us to determine type of living arrangement, which we are coding as follows: (a) alone, (b) with partner/spouse, (c) with parents, (d) with other relative or friend, (e) residential center, hospital, or treatment facility, (f) homeless shelter or other temporary housing, or (g) no residence – living on the streets.[2] (Except for a variable measuring whether a parolee lived in a residential center immediately after parole, these data are not yet complete and are not used in the preliminary analyses below).

Sampling: As we collect further data on residential histories and other variables contained in parole agent case notes, we are working with a sample rather than the population because the data require careful cleaning, and it would not be feasible to clean and code records for all 11,064 parolees. To ensure adequate variation in both the geographic locations and the characteristics of the neighborhoods to which our sampled cases return, we employed a two-stage cluster sampling design (the clusters are census tracts) with probabilities proportionate to size – a sampling scheme for selecting individuals with equal probability when clusters are of unequal sizes (Groves et al. 2004). In the first stage, we systematically sampled census tracts with probability proportionate to their size (i.e., the number of parolees who returned to each tract). Because census tract identification numbers tend to be ordered geographically, we sorted the list of Michigan census tracts by identification number as an assurance that the systematic

[2] Our experience thus far with case notes suggests that for those living on the streets, it is often be possible to determine census tract where the subject sleeps based on parole agent descriptions.

sample would be geographically diverse. In the second stage we sampled individuals within each selected census tract with probability inversely proportionate to the tract selection rate, such that an approximately equal number of individuals were chosen from each tract. When the first- and second-stage selection rates are multiplied together, the sampling probability is equal for every individual (Groves et al. 2004). This approach also ensures that the final sample size of parolees remains the same no matter which tracts were sampled in the first stage. We set the individual-level sampling probability to 1/3, resulting in a final sample size of 3,689.

Some tracts had fewer than the desired within-tract sample size of returning parolees. In such cases, we combined geographically proximate tracts that were in the same county and had similar socioeconomic characteristics until the number of parolees in the combined units equaled or exceeded the expected within-tract sample size (eight). Another issue is that some tracts had an exceedingly large number of parolees, which meant that their first stage probability of selection exceeded 1.0. Following the method suggested by Groves et al. (2004: 124), we included all such tracts in our sample (but removed them from the list from which the stage one sample is drawn), and randomly selected parolees from them at the overall rate (1/3). Finally, the 25 parolees whose addresses were missing or could not be geocoded were sampled separately, at the same overall rate (1/3).[3] [Note that this draft of the paper includes the entire population, as all variables used in the current analysis are available for the entire population.]

Models

The analysis presented in this paper models the characteristics of the first neighborhood (defined as a census tract) that individuals move to after release. The initial post-prison

[3] We will make further attempts to identify the census tracts of their first addresses by returning to the parole agent case notes.

neighborhood is important because previous research suggests that returning prisoners are at high risk of recidivism shortly (e.g., the first six months) after their release (Beck & Shipley 1989; Langan & Levin 2002) and because there could be strong "path dependence" in the relationship between the conditions of the first neighborhood and subsequent trajectories of residential mobility. As discussed above, our analysis is guided by two hypotheses about variation within the population of returning parolees in the neighborhoods they move into upon their release. The first hypothesis, motivated by spatial assimilation theory and research on segregation, predicts that black parolees and those of lower socioeconomic status will be at greater risk of returning to disadvantaged neighborhoods; while the second hypothesis, motivated by social capital theory, predicts that parolees who experienced more spells of incarceration and longer commitments will be most likely to return to disadvantaged neighborhoods.

In the current draft of this paper we present results of analysis where the dependent variable is a tract-level measure of socioeconomic disadvantage, the mean of five standardized variables that load heavily on the disadvantage factor from our factor analysis described above: percent black, percent poor, male unemployment, percent single mother households, and percent on public assistance. We standardized this variable by subtracting the mean and dividing by the standard deviation, so it has a mean of zero and standard deviation of one. We also briefly report results from models of other neighborhood variables, though because they are highly consistent with the disadvantage scale analysis, we display the regression results in detail. Independent variables for our analysis include: (a) individual-level sociodemographic characteristics (age, sex, race/ethnicity, education, marital status, number of dependents), (b) number of times incarcerated in prison (called "prefix"), (c) whether the parolee is a sex offender (d) assault risk assessments conducted in prison, (e) known history of mental illness, and (f) placement in a

residential center upon release. Table 1 shows descriptive statistics for these independent variables.

The analysis consists of OLS models: $Y_i = \beta_0 + \sum_{q=1}^{Q} \beta_q X_{qi} + u_i$ where Y is a neighborhood characteristic of the parolee's first address after prison and X is a set of predictors. The analytical strategy of using individual-level characteristics to predict the types of neighborhoods they move to is common in the demographic literature on residential mobility, where it is referred to as modeling "neighborhood attainment" (e.g. Sampson and Sharkey In Press, Logan and Alba 1993, Alba and Logan 1993). We examine separate models for blacks and whites (there are too few Asians or Hispanics in Michigan to allow separate models for these groups) and use county fixed effects to examine within-county variation in neighborhood disadvantage.

Preliminary Results

Table 2 compares the neighborhood context of the typical Michigan resident and the neighborhood context of the first residence after release of the typical parolee released in Michigan in 2003. Parolees are returning to census tracts that are highly disadvantaged on a number of dimensions. The average parolee returns to a neighborhood that is over 20 percent poor and has an unemployment rate over 10 percent, whereas the typical Michigander lives in a neighborhood with a poverty rate just under 11 percent and an unemployment rate just over six percent. Parolee's neighborhoods also have higher rates of welfare receipt, female-headed families and high school dropouts. Neighborhood median income is only $40,082, about $15,000 less than the state average. Parolee's neighborhoods have lower rates of affluent families, college graduates, professional or managerial workers, and owner-occupied homes. While the typical Michigander's neighborhood is 15 percent black, the typical parolee's neighborhood is over 40

percent black, perhaps unsurprising given the high incarceration rates among blacks. There are, however, some dimensions along which parolee's neighborhoods do not differ substantially from that of the typical Michigan resident, including percent Hispanic, percent foreign born, age structure, and residential stability.

The remainder of our analysis explores sources of variation among parolees in the neighborhoods to which they first return after release. We focus on the disadvantage scale described above, which includes rates of poverty, unemployment, single-mother families, welfare receipt, and percent black. Table 3 shows OLS regression models predicting neighborhood disadvantage using sociodemographic and criminal history variables. Since the dependent variable is standardized, coefficients can be interpreted as the number of standard deviations of neighborhood disadvantage associated with a one unit change in the independent variable. The first model presents OLS estimates. Women return to no more advantaged neighborhoods than men, but there are large differences by age, race, education, and marital status. Those who are older return to more disadvantaged neighborhoods. The race coefficients are some of the largest in the model. Net of the other variables in the model, black parolees return to census tracts that are one standard deviation more disadvantaged than whites, and Mexican parolees return to census tracts about a quarter of a standard deviation higher on the disadvantage scale than whites. (Caution should be exercised in interpreting the Mexican coefficient, as MDOC stopped coding Mexicans separately from whites some years ago, so parolees identified as Mexican likely entered prison earlier than the typical parolee in our data and therefore spent more time in prison.) More educated parolees return to more advantaged neighborhoods, as do those who were married the last time they entered prison. We suspect that married parolees may return to more advantaged neighborhoods because they can live with a

spouse after release, however the significant coefficient for those divorced or separated also suggests that some of the marriage effect may reflect selection into marriage among more advantaged individuals. Number of dependents does not seem to be systematically related to neighborhood disadvantage, although those with one dependent return to slightly less disadvantaged neighborhoods than those with none.[4]

Turning to the criminal history variables, those who have been to prison five or more times (prefix E or higher) return to more disadvantaged neighborhoods, as do those with high MDOC risk scores for assault. There appears to be no association between being a sex offender or having a mental illness known to MDOC and neighborhood disadvantage, net of the other variables in the model. Being placed in a residential center immediately after release is associated with a half standard deviation increase in neighborhood disadvantage, reflecting the fact that such centers were located in more disadvantaged neighborhoods.

Michigan has high levels of racial and economic segregation, with poor blacks concentrated in Detroit and a few small and medium size cities (e.g. Flint, Saginaw). How much of the variation in post-release neighborhoods can simply be accounted for by the counties to which parolees return, especially since most parolees return to the county where they were convicted? The second model in Table 3 adds county fixed effects to the model to determine how much of the variation in neighborhood disadvantage that we attribute to individual-level factors such as race is the result of which part of the state a person moves to as opposed to differences within counties in the level of disadvantage one encounters. These fixed effect models should be understood as primarily descriptive tools that allow us to examine whether the social disparities we observe in disadvantage are largely due to more macro-level variation in the places where

[4] We have not yet been able to sufficiently document how MDOC defines and collects data on the number of dependents. We suspect that there is a great deal of variation across parole agents in how this measure is operationalized, leading to low reliability.

people return after prison as opposed to within-county variation. For the county fixed effects, we divide Wayne county into Detroit and Non-Detroit, to allow Detroit to have its own fixed effect. Adding the fixed effects reduces the coefficients somewhat on our sociodemographic variables, though they all remain statistically significant. The black coefficient is reduced from about one standard deviation to about seven-tenths of a standard deviation, indicating there are still large race effects even within counties. As for the criminal history variables, number of times in prison and moving to a residential center remain statistically significant, though the residential center coefficient drops by over half.

Given the importance of race both in neighborhood context and the criminal justice system, do the other predictors of neighborhood disadvantage operate similarly for blacks and whites? Table 4 presents separate OLS models for blacks and whites ("Mexicans" and individuals of other race are not included in Table 4). While gender has no effect among whites, black females experience significantly more advantaged neighborhoods than black males. The age and education coefficients appear similar for blacks and whites, though they are both stronger among blacks. The marital status coefficients are significant for blacks but not whites, with married blacks returning to neighborhoods over a fifth of a standard deviation less disadvantaged than never-married blacks. Again this likely reflects some selection into marriage. Having an E prison prefix only increases neighborhood disadvantage among whites, though the difference between the white and black coefficients is not statistically significant. Interestingly, moving to a residential center increases disadvantage by almost an entire standard deviation among whites, but blacks who move to a residential center are actually advantaged relative to other blacks by doing so, perhaps reflecting the otherwise higher rates of disadvantage among black neighborhoods in Michigan.

It is instructive to examine the R^2 statistics for Tables 3 and 4. In Table 3, our sociodemographic and criminal history variables explain about 27 percent of the variation in neighborhood disadvantage, but comparing this statistic to those from the separate race regressions in Table 4 suggests that much of the explained variation in Table 3 is due to race, which is held constant in the models in Table 4. Among whites, the other sociodemographic and criminal history variables explain about 15 percent of the variation in neighborhood disadvantage. Among blacks they explain only two percent of the variation. Particularly among blacks, we have additional work to do in understanding the sources of variation in the first neighborhood context post release.

Next, we examine differences between male and female parolees by stratifying our analysis by gender; these models are displayed in Table 5. Age and race coefficients are in a similar direction for men and women, but the age effects are larger for women while the race effects are smaller. Education coefficients are also similar in magnitude for men and women, but the standard errors for women are considerably larger due to the small number of women in the population. A key difference between men and women appears to be in the relationship between marital status and neighborhood disadvantage. Although married men are advantaged relative to single men, married women gain no such advantage. A second key difference between men and women is evident in the prefix coefficients. While men who have been to prison more times move to more disadvantage neighborhoods, surprisingly, the opposite seems to be the case for women. We have no explanation at the moment for this gender difference. In addition, net of the other variables, women who move to residential centers do not move to more disadvantaged neighborhoods compared to other women, though men who move to centers do end up in more disadvantaged neighborhoods. This may be due to the location of women's centers in more

advantaged neighborhoods. (Variation in assault risk among women is too small to estimate coefficients for women separately.)

Finally, we have also estimated parallel models that predict other characteristics of the first neighborhood as the outcome. These models tell a very similar story, so we do not show them here. Predictors of neighborhood disadvantage including race, education, prefix, and marital status are also strong predictors of the poverty rate, percent black, and the concentration of parolees in one's neighborhood. In models of advantageous neighborhood characteristics such as median household income, the affluence scale, and the residential stability scale, these same predictors also operate in a substantively similar direction. One noteworthy finding is that sex offenders are slightly more likely to move to neighborhoods with lower residential stability. This is consistent with social organization theory, which suggests that residents of residentially unstable neighborhoods may have lower capacity to keep out these particularly stigmatized ex-offenders.

Conclusion and Future Directions

Our preliminary results have revealed striking racial disparities in the level of neighborhood disadvantage that returning parolees encounter. Although these differences are not necessarily surprising considering the large body of evidence on how racial segregation has created concentrations of disadvantage among blacks in many U.S. cities, the finding that such strong racial disparities are still found among such a relatively disadvantaged segment of the population – returning prisoners – is noteworthy. Moreover, our fixed effects model reveals that racial disparities in disadvantage persist even after accounting for differences in the counties to which black and white parolees return. Thus, this is not simply a story about black parolees

moving to Detroit and white parolees moving to other parts of the state; rather there are significant within-county disparities that we have thus far been unable to explain with the characteristics in our model. These preliminary results, along with the significant association we observe between education and neighborhood disadvantage, provide initial support for a neighborhood attainment theory of residential mobility in this population.

With the data we currently have at hand, we have not been able to develop satisfactory tests of the social capital hypothesis, which predicts that parolees who have been incarcerated more frequently and for longer durations are more likely to suffer deficits in neighborhood attainment because they have less support from family and friends to reintegrate. We do, however, find that the most chronic offenders – those who are returning from prison for at least the fifth time – move into neighborhoods that are significantly more disadvantaged, a result that is at least consistent with this theory. We also find that male parolees who are married, particularly black male parolees, move to significantly more advantaged neighborhoods after release.

Future analyses will also include additional independent variables, including time incarcerated (the number and length of prison and jail commitments), living arrangements (living alone, with a spouse, with other family, in a drug treatment center, or in a homeless shelter), further measures of criminality (number and type of criminal convictions), pre-prison employment, substance abuse history (assessments taken at prison in-take, results of substance abuse tests from prior periods of supervision), parole characteristics (month of release and expected parole length, whether the parolee is to be on electronic monitoring) and prior neighborhood characteristics (including a measure of the dependent variable from the pre-prison address). As an extension of this analysis of change/stability in neighborhood environments, we

will conduct exploratory analysis to determine which parolees return to the same census tract that they lived in before prison and then model the predictors of returning to the same neighborhood, using logistic regression.

In addition to neighborhood characteristics we also plan to analyze the living arrangements into which parolees are released from prison. We will create a typology of living arrangements after coding relevant data from the parole agent case notes and determining what the most common living arrangements are. We anticipate that the most common types of arrangements will be living (a) alone, (b) with a spouse, (c) with other family or friends, (d) in a drug treatment center, and (e) in a homeless shelter. Living alone or with a spouse probably represents the most stable living arrangements, whereas shelters and centers are probably the most temporary. Because of the lack of prior research on living arrangements of returning prisoners, this research is very exploratory. However, we expect that parolees with lower education and less stable pre-prison employment would be more likely to live in a shelter upon release. Also, social capital theory would predict that those parolees who have been in prison the longest would be more cut-off from their family and thus least likely to live with either a spouse or other family.

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Figure 1: First Residential Addresses of Parolees Released from Michigan Prisons in 2003

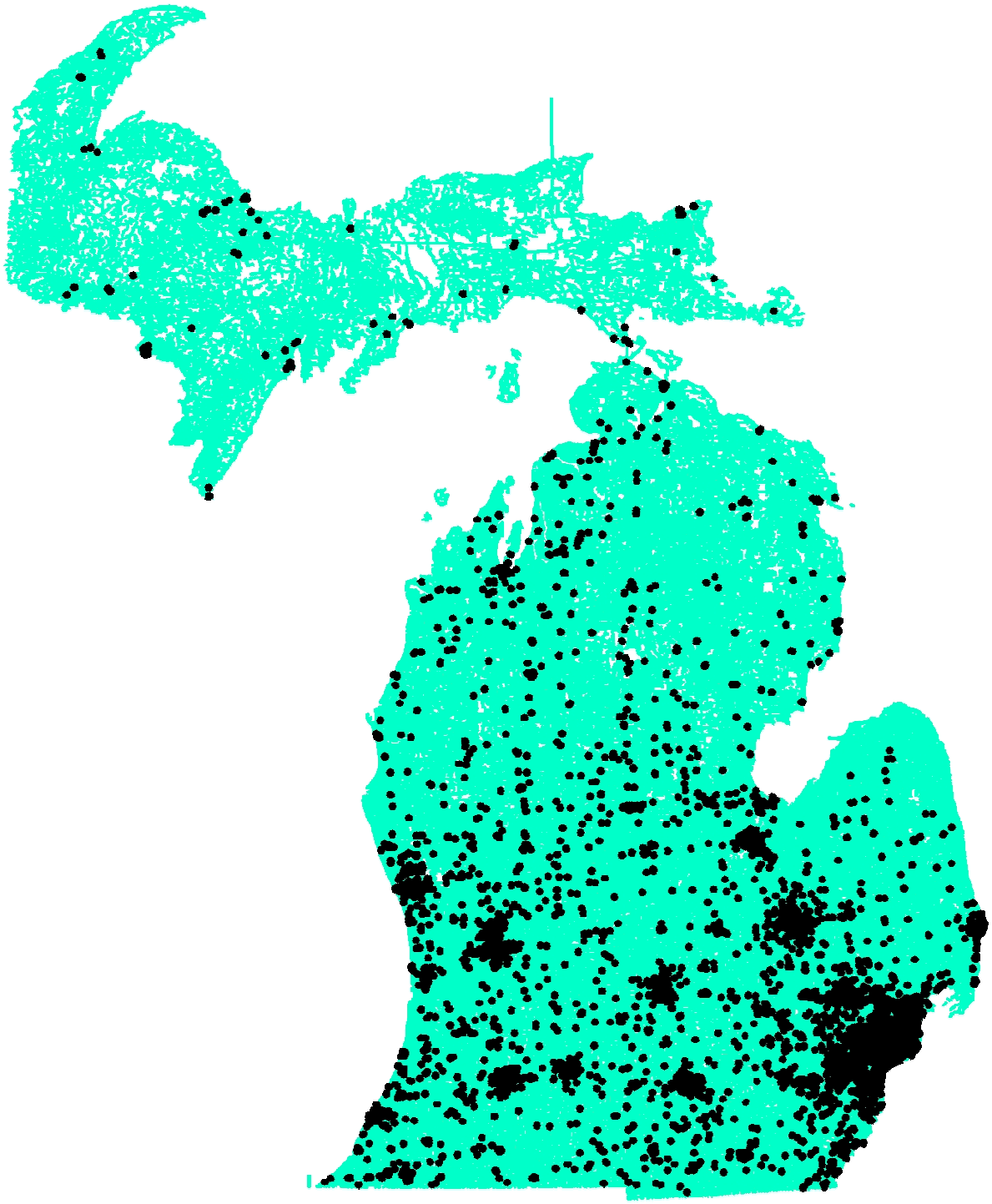

Table 1: Descriptive Statistics, Michigan Parolees Released in 2003

Individual-Level	Population		Sample	
Characteristics	%	*n*	%	*n*
Sex				
Male	92.20	*10,206*	92.38	*3,408*
Female	7.80	*863*	7.62	*281*
Age				
17-25	18.73	*2,073*	18.43	*680*
26-30	16.70	*1,849*	17.05	*629*
31-35	18.29	*2,024*	17.46	*644*
36-40	16.06	*1,778*	16.73	*617*
41-45	14.17	*1,568*	13.64	*503*
46-50	9.67	*1,070*	10.33	*381*
51-89	6.39	*707*	6.37	*235*
Race				
White	44.72	*4,950*	44.86	*1,655*
Black	53.49	*5,921*	53.16	*1,961*
Mexican	1.01	*112*	0.98	*36*
Other race	0.78	*86*	1.00	*37*
Education				
No high school	7.23	*791*	7.27	*265*
Some high school	35.41	*3,876*	35.16	*1,282*
GED	31.03	*3,397*	31.08	*1,133*
High school	20.12	*2,202*	20.27	*739*
More than high school	6.21	*680*	6.23	*227*

(Continued…)

Table 1, Continued

Individual-Level	Population		Sample	
Characteristics	%	*n*	%	*n*
Marital Status				
Never married	66.30	*7,339*	66.33	*2,447*
Married	12.37	*1,369*	12.06	*445*
Divorced or separated	20.20	*2,236*	20.44	*754*
Other	1.13	*125*	1.17	*43*
#Dependents				
0	39.55	*4,501*	39.82	*1,469*
1	22.07	*2,511*	22.66	*836*
2	17.23	*1,961*	18.00	*664*
3	9.74	*1,108*	10.82	*399*
4+	11.41	*1,299*	8.70	*321*
Prison Prefix				
A	47.54	*5,262*	47.63	*1,757*
B	26.83	*2,970*	25.83	*953*
C	13.37	*1,480*	13.74	*507*
D	6.32	*700*	6.72	*248*
E or higher	5.94	*657*	6.07	*224*
Assault Risk				
Very low	21.33	*2,359*	21.16	*780*
Low	32.58	*3,604*	33.79	*1,246*
Middle	23.77	*2,629*	23.19	*855*
Middle/potentially high	11.66	*1,290*	11.20	*413*
High/very high	10.66	*1,179*	10.66	*393*
Sex offender	9.92	*1,129*	7.73	*285*
Known mental illness	20.59	*2,263*	21.38	*783*
Moved to resid center	10.14	*1,122*	10.08	*372*

Table 2: Neighborhood Context of Average Michigan Resident and Parolees Released in 2003

Census Characteristics	Mean for all Michigan tracts (wgtd by pop)	Mean for tracts of returning parolees
%Poor	10.81	20.51
Unemployment rate	6.16	10.37
%Households on public assistance	8.05	16.15
%Female-headed families with children	24.02	43.13
Median family income	55,137	40,082
%Families with income $75k+	29.68	17.80
%College graduates	21.67	13.72
%Less than H.S. education	16.88	25.45
%Professional/managerial occupations	30.02	22.58
%Black	15.13	42.45
%Hispanic	3.24	5.64
%Foreign born	5.27	4.52
%17 and under	26.09	27.69
%18-34	23.01	26.17
%75 or older	2.09	1.82
%In same house 5+ years	57.22	54.31
%Owner occupied houses	74.44	58.11
	n =2707 tracts	*n* =11,032 people

Table 3: Regression Models Predicting Disadvantage Scale of First Census Tract after Release

	OLS			County fixed effects		
Independent Variables	Coef.	(SE)		Coef.	(SE)	
Female	-0.07	(0.04)		0.04	(0.03)	
Age (ref=17-25)						
26-30	0.08	(0.03)	**	0.06	(0.02)	*
31-35	0.10	(0.03)	***	0.04	(0.03)	
36-40	0.15	(0.03)	***	0.10	(0.03)	***
41-45	0.19	(0.03)	***	0.13	(0.03)	***
46-50	0.29	(0.04)	***	0.20	(0.03)	***
51-89	0.30	(0.04)	***	0.20	(0.04)	***
Race (ref=white)						
Black	0.97	(0.02)	***	0.61	(0.02)	***
Mexican	0.28	(0.08)	***	0.26	(0.07)	***
Other race	0.09	(0.09)		0.14	(0.08)	
Education (ref=no h.s.)						
Some high school	-0.04	(0.03)		0.01	(0.03)	
GED	-0.11	(0.03)	***	-0.04	(0.03)	
High school	-0.18	(0.04)	***	-0.08	(0.03)	**
More than high school	-0.26	(0.05)	***	-0.14	(0.04)	***
Marital Status (ref=never marry)						
Married	-0.13	(0.03)	***	-0.08	(0.03)	***
Divorced or separated	-0.07	(0.03)	**	-0.02	(0.02)	
Other	0.05	(0.08)		0.03	(0.07)	

(Continued…)

Table 3, Continued

Independent Variables	OLS Coef.	(SE)		County Fixed Effects Coef.	(SE)	
#Dependents (ref=0)						
1	-0.05	(0.02)	*	-0.04	(0.02)	*
2	-0.02	(0.02)		-0.02	(0.02)	
3	0.01	(0.03)		0.01	(0.03)	
4+	0.00	(0.03)		0.01	(0.03)	
Prison Prefix (ref=A)						
B	0.01	(0.02)		0.02	(0.02)	
C	0.02	(0.03)		0.03	(0.02)	
D	0.03	(0.04)		0.02	(0.03)	
E or higher	0.13	(0.04)	***	0.11	(0.03)	***
Assault Risk (ref=very low)						
Low	0.00	(0.03)		-0.01	(0.03)	
Middle	0.02	(0.03)		0.03	(0.03)	
Middle/potentially high	-0.01	(0.04)		-0.04	(0.03)	
High/very high	0.09	(0.04)	*	0.04	(0.03)	
Sex offender	-0.04	(0.03)		0.02	(0.03)	
Known mental illness	0.01	(0.02)		0.00	(0.02)	
Moved to resid center	0.46	(0.03)	***	0.11	(0.03)	***
Constant	-0.57	(0.05)	***	-0.39	(0.04)	***
r^2	0.27			0.26		
***p <.001, **p <.01, *p <.05 n	10,825			10,825		

Table 4: Regression Models Predicting Disadvantage Scale of First Census Tract after Release, by Race

	Whites			Blacks		
Independent Variables	Coef.	(SE)		Coef.	(SE)	
Female	0.01	(0.05)		-0.14	(0.06)	*
Age (ref=17-25)						
26-30	0.03	(0.04)		0.14	(0.04)	***
31-35	0.08	(0.04)	*	0.11	(0.04)	**
36-40	0.12	(0.04)	**	0.17	(0.04)	***
41-45	0.14	(0.04)	***	0.20	(0.05)	***
46-50	0.23	(0.05)	***	0.32	(0.05)	***
51-89	0.27	(0.06)	***	0.35	(0.06)	***
Education (ref=no h.s.)						
Some high school	0.00	(0.05)		-0.08	(0.05)	
GED	-0.03	(0.05)		-0.18	(0.05)	***
High school	-0.11	(0.05)	*	-0.24	(0.05)	***
More than high school	-0.23	(0.06)	***	-0.33	(0.07)	***
Marital Status (ref=never marry)						
Married	-0.06	(0.04)		-0.22	(0.04)	***
Divorced or separated	-0.01	(0.03)		-0.15	(0.04)	***
Other	-0.01	(0.11)		0.01	(0.12)	

(Continued…)

Table 4 Continued

	Whites			Blacks		
Independent Variables	Coef.	(SE)		Coef.	(SE)	
#Dependents (ref=0)						
1	0.00	(0.03)		-0.09	(0.03)	**
2	-0.01	(0.03)		-0.04	(0.03)	
3	0.05	(0.04)		-0.01	(0.04)	
4+	0.05	(0.06)		-0.03	(0.04)	
Prison Prefix (ref=A)						
B	0.03	(0.03)		0.00	(0.03)	
C	0.02	(0.04)		0.02	(0.04)	
D	0.04	(0.05)		0.01	(0.05)	
E or higher	0.19	(0.06)	***	0.09	(0.05)	
Assault Risk (ref=very low)						
Low	0.03	(0.04)		-0.05	(0.05)	
Middle	0.06	(0.04)		-0.05	(0.05)	
Middle/potentially high	0.07	(0.05)		-0.07	(0.06)	
High/very high	0.10	(0.05)		0.03	(0.05)	
Sex offender	0.01	(0.04)		-0.06	(0.05)	
Known mental illness	0.03	(0.03)		-0.02	(0.03)	
Moved to resid center	0.96	(0.03)	***	-0.12	(0.04)	**
Constant	-0.75	(0.06)	***	0.58	(0.07)	***
r^2	0.15			0.02		
***p <.001, **p <.01, *p <.05 n	4,841			5,789		

Table 5: Regression Models Predicting Disadvantage Scale of First Census Tract after Release, by Gender

	Males			Females		
Independent Variables	Coef.	(SE)		Coef.	(SE)	
Age (ref=17-25)						
26-30	0.07	(0.03)	*	0.29	(0.12)	*
31-35	0.08	(0.03)	**	0.33	(0.11)	**
36-40	0.14	(0.03)	***	0.42	(0.11)	***
41-45	0.20	(0.03)	***	0.25	(0.12)	*
46-50	0.28	(0.04)	***	0.44	(0.13)	***
51-89	0.29	(0.05)	***	0.53	(0.16)	***
Race (ref=white)						
Black	0.98	(0.02)	***	0.85	(0.07)	***
Mexican	0.29	(0.08)	***	0.23	(0.35)	
Other race	0.09	(0.10)		0.11	(0.39)	
Education (ref=no h.s.)						
Some high school	-0.05	(0.04)		0.13	(0.11)	
GED	-0.12	(0.04)	***	0.02	(0.12)	
High school	-0.19	(0.04)	***	-0.11	(0.12)	
More than high school	-0.27	(0.05)	***	-0.24	(0.14)	
Marital Status (ref=never marry)						
Married	-0.15	(0.03)	***	-0.03	(0.10)	
Divorced or separated	-0.09	(0.03)	**	0.00	(0.08)	
Other	0.04	(0.09)		0.10	(0.17)	

(Continued…)

Table 5, Continued

	Males			Females		
Independent Variables	Coef.	(SE)		Coef.	(SE)	
#Dependents (ref=0)						
1	-0.05	(0.02)	*	0.01	(0.08)	
2	-0.01	(0.03)		-0.02	(0.09)	
3	0.01	(0.03)		0.03	(0.10)	
4+	-0.02	(0.03)		0.19	(0.10)	
Prison Prefix (ref=A)						
B	0.01	(0.02)		-0.03	(0.07)	
C	0.03	(0.03)		-0.04	(0.10)	
D	0.05	(0.04)		-0.40	(0.17)	*
E or higher	0.15	(0.04)	***	-0.30	(0.16)	
Assault Risk (ref=very low)						
Low	-0.01	(0.03)		-	-	
Middle	0.01	(0.03)		-	-	
Middle/potentially high	-0.01	(0.04)		-	-	
High/very high	0.09	(0.04)	*	-	-	
Sex offender	-0.03	(0.03)		-0.04	(0.28)	
Known mental illness	0.02	(0.02)		-0.02	(0.06)	
Moved to resid center	0.52	(0.03)	***	-0.12	(0.09)	
Constant	-0.56	(0.05)	***	-0.79	(0.14)	***
r^2	0.28			0.24		
***p <.001, **p <.01, *p <.05 n	9,988			837		