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Are Sex Offenders Moving into Social Disorganization? Analyzing the Residential Mobility of California Parolees

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**Are sex offenders moving into social disorganization?**

**Analyzing the residential mobility of California parolees**

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**Are sex offenders moving into social disorganization?**

**Analyzing the residential mobility of California parolees**

**Abstract**

This study focuses on the relationship between returning offender residential mobility and neighborhood structural factors characteristic of socially disorganized neighborhoods. It utilizes a unique dataset that combines information on parolees released in the state of California during the 2005-06 time-period with their geocoded addresses to view the types of neighborhoods they are moving to. We find that sex offenders are entering neighborhoods with more concentrated disadvantage and residential instability upon re-entry from prison and upon subsequent moves. This effect for sex offender status is particularly strong for whites and Latinos, leading them into more socially disorganized neighborhoods. We also find that sex offenders are more likely to enter neighborhoods with more minorities as measured by Latinos and African Americans, and less likely to enter neighborhoods with more whites.

**Keywords:** parolees, residential mobility, sex offenders

**Bios**

**John R. Hipp** is an Associate Professor in the department of Criminology, Law and Society, and Sociology, at the University of California Irvine. His research interests focus on how neighborhoods change over time, how that change both affects and is affected by neighborhood crime, and the role networks and institutions play in that change. He has published substantive work in such journals as *American Sociological Review*, *Criminology*, *Social Forces*, *Social Problems*, *Mobilization*, *Crime & Delinquency*, *City & Community*, *Urban Studies* and *Journal of Urban Affairs*. He has published methodological work in such journals as *Sociological Methodology*, *Psychological Methods*, and *Structural Equation Modeling*.

**Susan Turner**, Ph.D. is a Professor of Criminology, Law and Society and Director of the Center for Evidence-Based Corrections at the University of California, Irvine. Before joining UCI in 2005, Dr. Turner was a senior behavioral scientist at the RAND Corporation in Santa Monica, Ca for over 20 years. Dr. Turner's areas of expertise include the design and implementation of randomized field experiments and research collaborations with state and local justice agencies. Dr. Turner is a member of the American Society of Criminology, the Association for Criminal Justice Research (California), and is a Fellow of the Academy of Experimental Criminology.

**Jesse Jannetta** is a Research Associate at the Urban Institute, where he manages projects related to reentry from prisons and jails, and the practice of community supervision. Prior to joining UI, Mr. Jannetta was a Research Specialist in the Center for Evidence Based Corrections at the University of California, Irvine.

**Are sex offenders moving into social disorganization?**

**Analyzing the residential mobility of California parolees**

A growing literature suggests that some neighborhoods are locked in a cycle of disadvantage in which certain structural characteristics (concentrated disadvantage, residential instability, and racial/ethnic heterogeneity) and neighborhood crime and disorder reciprocally influence each other (Felson 2002; Miethe and Meier 1994; Skogan 1990). This literature posits that crime and disorder in a neighborhood can bring about more residential mobility (Cullen and Levitt 1999; Dugan 1999; Hipp, Tita, and Greenbaum 2009; Liska and Bellair 1995; Liska, Logan, and Bellair 1998; Marshall 1979; Morenoff and Sampson 1997; Skogan 1990), lower home values (Schwartz, Susin, and Voicu 2003; Tita, Petras, and Greenbaum 2006), and racial/ethnic transformation (Bursik 1986a; Hipp 2010; Liska and Bellair 1995; South and Crowder 1997b), which result in even further crime and disorder. This reciprocal relationship between key neighborhood structural characteristics and crime rates implies a vicious cycle in which the residential mobility of the most disadvantaged residents plays a substantial role (Sampson and Sharkey 2008).

Paralleling these studies on the dynamic relationship between crime and disorder in neighborhoods is a growing literature on the possibly dynamic and reciprocal relationship between offenders returning from prison and neighborhood characteristics (Clear 2007). There is a growing awareness that certain neighborhood characteristics can have important effects on returning offenders' ability to reintegrate into society. The evidence that prisoners come from, and return to, the most disadvantaged neighborhoods, suggests a heightened risk of recidivism (Hipp, Petersilia, and Turner 2010; Kubrin and Stewart 2006; Travis, Solomon, and Waul 2001; Travis and Waul 2003). Returning offenders may affect neighborhoods by increasing levels of

## Parolee residential mobility

neighborhood crime (Hipp and Yates 2009; Raphael and Stoll 2004; Vieraitis, Kovandzic, and Marvell 2004), through the residential instability caused by their incarceration and subsequent return to the neighborhood (Clear, Rose, and Ryder 2001; Rose and Clear 1998), or by destabilizing neighborhoods through their higher geographic mobility (Fleming, Hirsch, Lal, Piper, Sharma, Shimada, Todd, and Gorr 2005; La Vigne and Parthasarathy 2005). The numerous challenges that returning offenders face in such basic areas as employment suggests that they may find moving out of socially disorganized neighborhoods more difficult than do non-offenders. The number of offenders annually returning to U.S. neighborhoods from prisons has increased from 170,000 in 1980 to about 700,000 in 2005 (Lynch and Sabol 2001; Sabol and Harrison 2007), and the number of ex-offenders residing in communities has risen from 1.8 million in 1980 to 4.3 million in 2000 (Raphael and Stoll 2004). Given that returning offenders face different obstacles in residential mobility than does the general population, understanding their mobility patterns becomes particularly important.

Although offenders generally return from prison to the neighborhoods they left behind, a key question is which offenders are more likely to later *move* into neighborhoods with high levels of the key structural determinants of social disorganization. Although prior research has provided some descriptive information on the types of neighborhoods to which offenders are released after prison (La Vigne, Kachnowski, Travis, Naser, and Visher 2003; La Vigne and Parthasarathy 2005; Solomon, Thomson, and Keegan 2004; Visher and Farrell 2005; Visher, Kachnowski, La Vigne, and Travis 2004), and to which they move subsequently (La Vigne and Parthasarathy 2005; Visher and Farrell 2005), we have little information on whether certain offender characteristics are associated with moving to more disadvantaged neighborhoods. In particular, are sex offenders more likely to enter disadvantaged neighborhoods? Given the likely barriers sex offenders face during residential mobility, they may be more likely to end up in

## Parolee residential mobility

socially disorganized neighborhoods. Likewise, are offenders who have spent more time incarcerated, or those who have committed more serious or violent offenses, more likely to move into disadvantaged neighborhoods?

In this study we address these voids by constructing and analyzing a unique data set of parolees in the state of California in 2005 and 2006. Due to California's unique combination of determinate sentencing and mandatory parole supervision, essentially all offenders released from prison must serve a term of parole supervision (Petersilia 2006). As a result, the terms "returning offenders" and "parolees" can be used interchangeably for our sample. We view whether the characteristics of these parolees explain movement into neighborhoods with higher levels of the three key structural determinants of socially disorganized neighborhoods: concentrated disadvantage, residential instability, and racial/ethnic heterogeneity. We test whether certain parolees have more difficulty escaping socially disorganized neighborhoods, either because of the stigma surrounding their status, or because of individual characteristics. Specifically, we ask: 1) are sex offenders, violent offenders, and those who have spent more time in prison more likely to return upon release from prison to neighborhoods high in these three key structural determinants of socially disorganized neighborhoods; 2) are they more likely to subsequently move into neighborhoods high in these three key structural determinants of socially disorganized neighborhoods, controlling for the characteristics of their previous neighborhood of residence. By studying a relatively racially/ethnically heterogeneous state like California, we are able to move beyond the black/white focus of much prior research to also study the residential mobility experience of Latino and Asian parolees.

## **Theoretical Background**

### *Socially disorganized neighborhoods*

## Parolee residential mobility

Social disorganization theory is a mainstay of ecological research on the rate of crime in neighborhoods. Initially developed by the Chicago School in the early twentieth century (Shaw and McKay 1942), the theory posits that neighborhoods with more concentrated disadvantage, residential instability, and racial/ethnic heterogeneity have more social disorder and consequently higher rates of crime. More recent research has explicated the mechanisms through which such structural characteristics affect neighborhood social disorder, arguing that these structural characteristics affect the level of social interaction in such neighborhoods (Bursik 1988; Sampson and Groves 1989), and as a consequence the level of collective efficacy available to neighborhood residents that would enable them to respond to such problems (Sampson and Raudenbush 1999; Sampson, Raudenbush, and Earls 1997). This reduced social interaction also affects the sense of attachment residents feel to the neighborhood, and reduces their willingness to invest in maintaining their property. In support of these postulates, numerous empirical studies have found that neighborhoods with higher levels of concentrated disadvantage, residential instability, and racial/ethnic heterogeneity have higher levels of crime (Bellair 1997; Hipp 2007; Roncek and Maier 1991; Sampson and Groves 1989; Warner and Pierce 1993).

There is a growing realization among scholars working within this framework of the need to understand the evolution of neighborhoods (Felson 2002; Miethe and Meier 1994; Skogan 1990). In this view, these key structural characteristics of neighborhoods might be reciprocally affected by crime. Thus, crime can increase residential instability if it increases the likelihood of residential mobility by residents (Cullen and Levitt 1999; Dugan 1999; Hipp, Tita, and Greenbaum 2009; Liska and Bellair 1995; Liska, Logan, and Bellair 1998; Marshall 1979; Morenoff and Sampson 1997; Skogan 1990; Xie and McDowall 2008). To the extent that crime makes a neighborhood more undesirable and reduces home values (Hipp, Tita, and Greenbaum 2009; Schwartz, Susin, and Voicu 2003; Tita, Petras, and Greenbaum 2006), it can induce lower



## Parolee residential mobility

income residents to move in. Furthermore, if the types of people leaving or entering a neighborhood with a higher rate of crime differ based on race/ethnicity, crime can induce change in the racial/ethnic heterogeneity of the neighborhood (Bursik 1986a; Hipp 2010; Liska and Bellair 1995; South and Crowder 1997b). This suggests the importance of focusing on residential mobility patterns, the types of neighborhoods to which they are moving, and how neighborhood structural characteristics affect this mobility. For example, recent work by Sampson and Sharkey (2008) illustrated that residents leaving neighborhoods with higher levels of concentrated disadvantage frequently moved into neighborhoods equally high in concentrated disadvantage, and this effect was particularly strong for racial/ethnic minorities.

Scholars have extended the idea that crime can affect neighborhood structural characteristics to suggest that the incarceration resulting from such crime further affects neighborhood instability (Clear 2007; Clear, Rose, and Ryder 2001; Clear, Rose, Waring, and Scully 2003). Such an argument is based on the observation that not only does incarceration remove offenders from neighborhoods, but they often do not remain long in the neighborhood when they do return, given the evidence that 44 percent of persons released from prison recidivate within one year (Langan and Levin 2002). In this perspective, incarceration and reentry create an environment in a constant state of flux due to this coercive mobility, which results in heightened residential instability. Thus, just as the social disorganization theory posits that residential instability and racial/ethnic heterogeneity will disrupt community social networks that otherwise enable the provision of informal social control sanctions that might minimize crime, both incarceration and reentry also affects these neighborhood ties. Furthermore, the instability of parolees due to high recidivism rates and subsequent reincarceration can affect family composition, which likely decreases the informal social control of children.

## Parolee residential mobility

Residential mobility of parolees—either voluntary or coercive through re-imprisonment—not only impacts the neighborhood, but also has a reverberating effect on parolees if these changing neighborhood characteristics affect parolee recidivism. Given the evidence that neighborhoods with more concentrated disadvantage increase recidivism (Hipp, Petersilia, and Turner 2010; Kubrin and Stewart 2006), there will be important consequences if parolees lack the ability to exit such disadvantaged neighborhoods. Socially disorganized neighborhoods not only likely increase recidivism due to the mechanisms posited by the social disorganization theory, but also because such neighborhoods may be unable to address such social and health needs of parolees as housing, employment opportunities, drug treatment, healthcare, and counseling.

### *Entering or escaping socially disorganized neighborhoods*

A body of research has focused on the general population in studying residential mobility of residents into the suburbs (South and Crowder 1997b), and into and out of poverty neighborhoods (Crowder and South 2005; Quillian 1999; Quillian 2003; South and Crowder 1997a; South, Crowder, and Chavez 2005). Despite this scholarship studying the residential mobility of the general population, we have little information on the residential mobility patterns of one particularly important sub-population: ex-offenders. To the extent that parolees are simply moving from one economically disadvantaged neighborhood to another, they may add to the residential instability of such neighborhoods. Given that some research has suggested that the combination of economic disadvantage along with high levels of residential instability has particularly deleterious consequences for the level of crime in neighborhoods (Warner and Pierce 1993; Warner and Rountree 1997), understanding the extent to which parolees simply move to other disadvantaged neighborhoods may be important. Given prior research and theorizing, there

## Parolee residential mobility

are two characteristics of returning offenders that may have important effects on such mobility:

1) status as a sex offender ; 2) criminal history.<sup>1</sup>

Sex offenders likely face mobility restrictions due to legal constraints as well as stigmatization. Megan's Law, signed into law in 1996 by President Clinton, requires states to register individuals convicted of sex crimes against children as well as make personal information on registered sex offender available to the public. Some states have added further layers of control over sex offenders in the community with the enactment of residency restrictions and electronic monitoring. Currently, thirty states have residency restrictions which prohibit convicted sex offenders from living near locations where children congregate—places like parks, schools, day care centers or even bus stops (Zgoba, Levenson, and McKee Forthcoming). Residency restrictions limit sex offenders' housing options, render many metropolitan areas off-limits for sex offenders and can severely reduce housing availability in suburban and rural areas as well (Chajewski and Mercado Forthcoming; Mustaine, Tewksbury, and Stengel 2006; Zgoba, Levenson, and McKee Forthcoming). There is some evidence that sex offenders live in neighborhoods in which the social service providers experience higher levels of potential demand that may tax their resources (Hipp, Jannetta, Shah, and Turner 2009).

California has enacted a number of restrictions on sex offender residency. Legislation passed in 2005 requires that sexually violent predators or serious paroled sex offenders cannot live within one-fourth of a mile of a school, and that high-risk paroled sex offenders cannot reside within one-half mile of a school, daycare center, or where children congregate. According to a California Research Bureau report, such laws make it harder for California officials to find a place for paroled sex offenders to live. The authors cite a number of examples in which sex

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<sup>1</sup> Another important category of parolees are drug abusers. Indeed, one study focused on the residential mobility of drug users within San Diego, CA, finding them to be confined to relatively disadvantaged neighborhoods (Cahill and LaVigne 2008). Unfortunately, we do not have information on drug abuse behavior in our sample, precluding us from studying this characteristic.

## Parolee residential mobility

offenders were forced to move, including in response to a community protest against 27 paroled sex offenders who had been placed in hotels and motels within 11 miles of Disneyland (Nieto and Jung 2006).

In November 2006, Californians passed Proposition 83, otherwise known as “Jessica’s Law, which made approximately 400 changes to California statute, affecting the way sex offenders are sentenced, released, and supervised in the community (California Sex Offender Management Task Force 2007). A major provision of the law prohibits all sex offenders required to register pursuant to Penal Code 290—any sex offender who committed an offense enumerated in the penal code section—from residing within 2,000 feet of any school, daycare, or other place where children congregate (California Sex Offender Management Board 2008). Within increasingly more restrictive housing requirements for sex offenders, we would expect this group of offenders to show more residential mobility than other offender groups.

Beyond these legal constraints, sex offenders are particularly likely to encounter stigmatization (Kruttschnitt, Uggen, and Shelton 2000; Pager 2003; Petersilia 2003). This stigma will likely impact their ability to move into less disorganized neighborhoods. Despite the plausibility of these hypotheses, there is little evidence regarding the types of neighborhoods that sex offenders enter. Thus, our primary hypothesis is:

*Hypothesis 1: Parolees who are sex offenders will be more likely to enter neighborhoods with more concentrated disadvantage, residential instability, and racial/ethnic heterogeneity*

Although our primary focus is on the mobility of sex offenders, we also view the effect of two measures of criminal history. It is informative to contrast these two measures with sex offender status given that although these are all serious characteristics that might plausibly affect residential mobility, sex offender status is distinct in that it often is more visible due to various disclosure laws. First, the residential mobility of ex-offenders with more serious prior offenses

## Parolee residential mobility

may be affected by the status of their criminal history. Returning offenders who have convictions for serious property or violent crime events may encounter considerable difficulty when attempting to move into less disorganized neighborhoods. Regardless of whether such offenders face more stigma because of the seriousness of their prior crimes, or whether the seriousness of their prior convictions are simply a marker for individual deficits—such as anger management problems, limited job skills, limited formal education, and cognitive behavioral deficits—that inhibit entry into less disorganized neighborhoods (Petersilia 2003; Travis and Petersilia 2001), the consequences would be the same. Nonetheless, there is little evidence addressing whether returning offenders who have engaged in such serious crimes are more likely to move into more disadvantaged neighborhoods.

*Hypothesis 2: Parolees who have committed more serious offenses will be more likely to enter neighborhoods with more concentrated disadvantage, residential instability, and racial/ethnic heterogeneity*

Second, it is possible that the length of time spent in prison explains the type of neighborhoods parolees move into. These returning offenders with a long history of incarceration may encounter stigmatization that limits their ability to move into less disorganized neighborhoods (Pager and Quillian 2005; Pager 2003; Petersilia 2003; Western 2002). Alternatively, this history of incarceration may be a proxy for individual deficits, or for institutionalization effects of longer-term incarceration that limit their ability to attain residence in less socially disorganized neighborhoods.

*Hypothesis 3: Parolees who have spent more time in prison will be more likely to enter neighborhoods with more concentrated disadvantage, residential instability, and racial/ethnic heterogeneity*

## **Data and Methodology**

### *Data*

To address these research questions, we created a unique dataset that combines information on all parolees in the state of California released during 2005 or 2006 with their addresses geocoded into the appropriate census tract using ArcGIS 9.3. Census tracts were constructed by the U.S. Census, and in our study the median tract has about 4,500 with a standard deviation of 2,143. Again, in California “all parolees” is virtually synonymous with “all offenders released from state prison.” The data on parolees were obtained from the California Department of Corrections and Rehabilitation (CDCR). These data provide information on all parolees released during the time period, the dates of entry to and exit from a CDCR institution, certain characteristics of the parolees, and the effective dates of all known addresses. We were able to successfully geocode over 80 percent of the parolees’ addresses, and there is some evidence that this is a relatively high rate and minimizes the effect of measurement error due to the failure to geocode addresses (Ratcliffe 2004).

Our study site, California, shares similarities with other states and a few key differences. California’s crime rate is slightly lower than the national average (Petersilia 2008). Although California incarcerates more individuals than any other state, this is largely driven by the state’s large population. Its incarceration *rate* (471 per 100,000), on the other hand, is only slightly higher than the national average of 450 per 100,000 (West and Sabol 2009). California is a determinate sentencing state, as are Florida and Illinois and more than 10 other states (Stemen, Rengifo, and Wilson 2006) with lengths of initially imposed prison terms about the same as other determinate sentencing states.

California’s supervision of offenders after release is what sets it apart from virtually all other states. With the exception of Illinois, California is the only state that combines determinate

## Parolee residential mobility

sentencing with near universal parole supervision (Petersilia 2008). As a result, California's three-year return to custody rate for its approximately 120,000 prisoners released annually is two-thirds (Fischer 2005), compared to the national average of about 50 percent within three years (Langan and Levin 2002). Fischer (2005) analyzed the California recidivism rate and found that it is technical violation returns that are driving the high return to custody rates.

According to Petersilia (2008) incarceration is more likely to be used as a short-term catch and release policy in California – resulting in much more churning in and out of prison for parolees than other states.

### *Outcome measures*

The units of analysis for our models are parolee moves. We used information on each address at which a parolee resided over this two-year period. About half of the parolees had only a single address over the study period, and thus did not move after returning from prison. We included each move by a parolee (including the first address after release from prison). In some instances, information is not available for an address (when a parolee is homeless, has absconded, or simply does not provide information to their parole agent). These time points are dropped from the analysis given that we do not have information on the “neighborhood” of residence at this point, and imputing values for an outcome variable generally are not helpful (von Hippel 2007). If a parolee returns to prison, they leave the dataset; if they are re-released from prison during the study period, this would begin a new sequence of addresses at release from prison, and then subsequent moves. Unfortunately, the data do not include information on the type of residential address, so we are not able to differentiate among different living arrangements.

For each address of the parolee, we placed it in its census tract and measured this context along the three key structural determinants of social disorganization theory. We measured the

## Parolee residential mobility

concentrated disadvantage of the neighborhood based on a principal components factor score that combined five measures: 1) the percent in poverty; 2) the unemployment rate; 3) percent single parent households; 4) median household income; and 5) median home value. This factor score is a standardized measure with a mean of 0 and a standard deviation of 1, with higher values indicating neighborhoods with more concentrated disadvantage. We measured residential stability of the neighborhood based on a principal components factor score combining three measures: 1) the average length of residence in the tract; 2) percent homeowners; and 3) percent occupied units. This index is also standardized, with higher values indicating neighborhoods with more residential stability.

We also viewed the racial/ethnic composition and heterogeneity of the tracts as outcomes. We measured the racial/ethnic heterogeneity (EH) in a tract  $k$  with the Herfindahl index (Gibbs and Martin 1962: 670) of five racial/ethnic groupings, as follows:

$$(1) \quad EH_k = 1 - \sum_{j=1}^J G_j^2$$

where  $G$  represents the proportion of the population of ethnic group  $j$  out of these  $J$  racial/ethnic groups. The racial/ethnic groups are African-American, Latino, Asian, white, and other race.

We also estimated models in which the percent African-American, percent Latino, and percent white of the tract are the outcomes: although not measuring racial/ethnic heterogeneity specifically, these models provide insight into the racial/ethnic composition of the neighborhoods parolees move into, and correspond to a measure of “heterogeneity” used by some social disorganization studies (Bursik 1986b; Smith and Jarjoura 1988).

### *Measurement issues*

We point out that the methodological approach of this study is unique in focusing on residential mobility of parolees into neighborhoods based on the three structural characteristics noted by the social disorganization theory: 1) concentrated disadvantage; 2) residential



## Parolee residential mobility

instability; 3) racial/ethnic heterogeneity. Prior studies of the general population have frequently measured disadvantaged neighborhoods based on a single measure of whether the poverty level in the neighborhood exceeded a particular threshold—such as greater than 20, 30, or 40 percent poverty (Crowder and South 2005; Quillian 1999; Quillian 2003; South and Crowder 1997a; South, Crowder, and Chavez 2005). Any threshold value is arbitrary, as it is not clear why, for instance, a neighborhood with a 30 percent poverty rate is disadvantaged whereas one with a 29 percent poverty rate is not disadvantaged (if one chooses to employ a 30 percent criterion as the threshold). A more straightforward approach might define the level of poverty as a disadvantageous feature of a neighborhood and measure this as a continuous outcome. An even better approach measures the average level of income in the neighborhood to provide more information on the economic level of the neighborhood, as done in a recent study by Sampson and Sharkey (2008). We extend this further by adopting an approach common in the neighborhood crime literature of combining several measures into an index of concentrated disadvantage (Browning and Cagney 2002; Morenoff, Sampson, and Raudenbush 2001; Sampson and Raudenbush 1999; Sampson, Raudenbush, and Earls 1997). We are therefore measuring the change in concentrated disadvantage in standard deviations for a particular type of ex-offender.

### *Characteristics of parolees*

Based on the theoretical discussion above, we constructed measures of several characteristics of parolees to determine their relationship to the types of neighborhoods they: 1) enter after release from prison and 2) move into during subsequent moves. To account for parolees' time in prison, we computed the total number of days they have spent in CDCR institutions over their lifetime. We take into account the number of prior serious property and violent offenses. By California statute, violent offenses include all murders, about 80% of rapes,

## Parolee residential mobility

50% of assaults, and 40% of robberies. Serious offenses include all of the above four violent offenses as a subset, as well as property crimes as defined in Cal. Penal Code Sections 667.5(c), 1192.7(c), and 1192.8. Consequently, 60% of burglaries and about 95% of arsons are included as serious crimes. We used the CDCR indicator of whether the parolee is a registered sex offender.

As additional controls to minimize the possibility of spurious findings, we accounted for the race, age, and gender of the parolee. To test race/ethnicity effects, we created measures indicating whether the parolee is African-American, Latino, Asian, white, or other race. To account for possible nonlinear effects of age, we created a measure of the age of the parolee at the first date of the address spell and measures of age squared and age cubed. We created an indicator of whether the parolee is female to account for possible gender differences in residential mobility. Table 1 displays the descriptive statistics for the parolees and their neighborhood characteristics for this sample, and shows that the average tract in which a parolee resides is .74 standard deviations above the mean in concentrated disadvantage and .40 standard deviations above the mean in residential instability. The tracts that parolees reside in have about 25 percent more racial/ethnic heterogeneity than an average tract in the state, and have proportionally more Latinos and African Americans, and fewer whites, than an average tract. The last two columns of this table show the descriptive statistics of parolees we were unable to geocode (either because of not having an address, or having an invalid address). As can be seen, the differences between those who were or were not geocoded are relatively modest. We performed diagnostics on our data, and found no collinearity problems (all variance inflation factor values were well below 4), and no evidence of influential cases in this large sample.

<<<Table 1 about here>>>

## Parolee residential mobility

### *Methodology*

Our outcome measures are continuous variables of different neighborhood characteristics. Because we are interested in accounting for differences across counties, and not interested in modeling these differences in a hierarchical linear modeling framework, we estimated fixed effects regression models by conditioning on the county of residence. This avoids the problem of possible misspecification in a multilevel model that can lead to biased estimates (Angeles, Guilkey, and Mroz 2005). We are therefore effectively only comparing parolees living in the same county. This avoids the problem of comparing parolees moving within urban counties (and attempting to model all the characteristics associated with such counties) with those moving within rural counties.

Our first set of models predicts the characteristics of the neighborhood that is first entered after leaving prison:

$$(1) \quad y = \alpha + PB + \text{COUNTY}\delta + \varepsilon$$

where  $y$  is the neighborhood characteristic of interest of the tract the parolee returns to (i.e., concentrated disadvantage),  $\alpha$  is an intercept,  $P$  is the vector of parolee characteristics,  $B$  is a vector of their effects on the outcome,  $\text{COUNTY}$  is a matrix of  $K-1$  indicators for the  $K$  counties in California,  $\delta$  is a vector of the effects of each of these counties, and  $\varepsilon$  is a normally distributed error term.

In the second set of models, the outcome is the neighborhood characteristic of interest in the tract the parolee moves to, controlling for this characteristic in their prior tract of residence.

This implies the following model:

$$(2) \quad y_{(t)} = \alpha + \rho y_{(t-1)} + PB + \text{COUNTY}\delta + \varepsilon$$

where all terms are defined as before, and  $y_{(t-1)}$  is the neighborhood characteristic of interest in the parolee's previous tract of residence which has a  $\rho$  effect on the current tract's characteristics

## Parolee residential mobility

( $y_{it}$ ). In all of these models we correct the standard errors by using robust standard errors with the Huber/White correction to account for the possibility that parolees may have made more than one move.<sup>2</sup> In this sample, 50% did not change residences, 26% moved just once, 12% moved twice, and 12% moved more than twice. All models were estimated in Stata 9.2.

### Results

#### *What type of neighborhoods do returning parolees enter?*

We begin by viewing the models explaining the differences in types of neighborhoods when first exiting prison. We find that for the stigmatizing characteristic of being a sex offender the effects are substantial, as seen in Table 2. Given that two of our outcome measures are factor scores, interpretation of the size of the effects is based on standard deviation changes. Sex offenders are entering more disorganized neighborhoods upon re-entry than non-sex offenders: their neighborhoods have .06 standard deviations more concentrated disadvantage and .09 standard deviations more residential instability (though no difference in racial/ethnic heterogeneity). This is consistent with Hypothesis 1 that sex offenders enter more socially disorganized neighborhoods.

<<<Table 2 about here>>>

On the other hand, there is little evidence that criminal history or length of incarceration of parolees results in residing in more disadvantaged neighborhoods. There is essentially no evidence that those with a longer history of incarceration are returning from prison to neighborhoods with any more concentrated disadvantage, residential instability, or racial/ethnic heterogeneity than those with a shorter history. Likewise, there is no evidence that parolees who have been convicted of more serious property or violent crimes reside in worse neighborhoods

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<sup>2</sup> This approach accounts for the clustering of addresses within parolees by computing robust standard errors correcting for this clustering. For a more detailed description, see Wooldridge (Wooldridge 2009: 267).

## Parolee residential mobility

after prison release than other parolees. These null findings argue against Hypotheses 2 and 3.<sup>3</sup> Thus, there is something particularly unique regarding the experience of sex offenders.

These first models focused on the types of neighborhoods parolees are re-entering after release from prison; however, a critique is that parolees may be simply returning to the same neighborhood they left when they entered prison. We address this issue by next turning to the models predicting the characteristics of the neighborhood that the parolee moves to *after* re-entering the community, controlling for the characteristics of their previous neighborhood of residence. There is evidence in models 4 and 5 that sex offenders are moving into neighborhoods with more concentrated disadvantage and residential instability than other parolees, even controlling for the characteristics of their prior neighborhood. The new neighborhood for a sex offender has .03 standard deviations more concentrated disadvantage and .07 standard deviations more residential instability.

On the other hand, we see that the length of incarceration of the parolee has only a modest effect on the type of neighborhood to which they move. Those who have spent more time in prison are moving into neighborhoods with more concentrated disadvantage and residential instability, though these effects are quite modest. There is also minimal evidence that criminal history in terms of serious property or violent prior convictions for a parolee matter for the type of neighborhood to which they are moving. In sum, our analysis of parolee moves subsequent to release provides minimal support for Hypotheses 2 and 3, but consistent support for Hypothesis 1.

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<sup>3</sup> There is not a particularly high overlap empirically between sex offenders and serious, violent, and long-term offenders. Sex offenders are correlated .16 with long-term offenders and .29 with violent offenders, and essentially no correlation with serious property offenders. We further assessed this by estimating separate models including only one of these different measures of prior criminal offending at a time, rather than all of them simultaneously. The pattern of results was similar to the models presented in Table 2, suggesting no evidence that our findings are due to the particular model specification.

## Parolee residential mobility

We also point out that, among our control variables, we see large race/ethnicity effects for both the first neighborhood upon re-entry and subsequent neighborhoods to which they move. African-American parolees enter tracts with more concentrated disadvantage, residential instability, and racial/ethnic heterogeneity than white parolees (.41 standard deviations more concentrated disadvantage, .16 standard deviations more residential instability, and .20 standard deviations more racial/ethnic heterogeneity), as seen in Models 1, 2, and 3 in Table 2.<sup>4</sup> Furthermore, they subsequently move into neighborhoods with .29 standard deviations more concentrated disadvantage, .12 standard deviations more residential instability, and .13 standard deviations more racial/ethnic heterogeneity than white parolees, as seen in models 4, 5, and 6 in Table 2. Although Latinos return to and subsequently move into neighborhoods with more concentrated disadvantage than whites (.16 and .11 standard deviations more), there is no evidence that these neighborhoods are higher in residential instability and they are in fact lower in racial/ethnic heterogeneity. Thus, it does not appear that the neighborhoods of Latinos contain unambiguously more of the structural determinants of disorganization as do those of African-Americans. There is also modest evidence that Asian parolees are moving into worse neighborhoods along these dimensions: although they return to neighborhoods with somewhat higher levels of concentrated disadvantage and racial/ethnic heterogeneity than those of whites, the neighborhoods they subsequently move into do not differ from those of whites based on concentrated disadvantage, and actually are somewhat *lower* in residential instability.

Although there is modest evidence that females are entering neighborhoods after prison with more residential stability, the effects for age are unambiguous: older parolees are entering, and moving into, worse neighborhoods than are younger parolees. We plot these marginal effects by age for the level of concentrated disadvantage in the tracts to which parolees return in

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<sup>4</sup> This standardized effect for racial/ethnic heterogeneity is computed by dividing the coefficient by the standard deviation of racial/ethnic heterogeneity for tracts in this sample ( $3.016/15.48=.195$ ).

## Parolee residential mobility

Figure 1, and see that whereas parolees in their mid-twenties are entering neighborhoods lower in concentrated disadvantage than any other aged parolees, the neighborhoods of older parolees are much worse. For instance, a 49 year-old parolee enters a tract with .10 standard deviations more concentrated disadvantage than that of a 37 year-old parolee, and about .15 standard deviations more than the tract of a 27 year-old. The general shape of this age relationship is similar when viewing the level of residential instability of the neighborhoods to which they return, as well as the concentrated disadvantage and residential instability for the neighborhoods they subsequently move into. Thus, controlling for the other variables in these models, older parolees are moving into neighborhoods with more concentrated disadvantage and residential instability.<sup>5</sup>

<<<Figure 1 about here>>>

There is also evidence that the first move after prison is actually moving the parolee into better neighborhoods based on these outcome measures than are later moves, as these neighborhoods have lower levels of all three structural determinants of socially disadvantaged neighborhoods. This of course implies that subsequent moves are taking these parolees into *worse* neighborhoods. This may suggest a selection effect: a parolee who makes one or two residential moves may be improving their lot, whereas the evidence that a parolee has made multiple moves may in itself be a risk indicator. Our results imply that mobility may have an effect on recidivism if such moves are taking these parolees into more disadvantaged neighborhoods.

## *Different effects for sex offenders by race/ethnicity*

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<sup>5</sup> We estimated additional models in which we included the physical distance of the move. It is questionable whether this measure is appropriate to include in the model given that it is arguably not exogenous to this process. That is, certain types of parolees may simply be better able to move to less disadvantaged neighborhoods, which also happen to be farther away from the current residence. While there was strong evidence that longer distance moves take parolees into less disadvantaged neighborhoods based on all three characteristics measured here, it is reassuring that the effects of the variables in our models were not affected by the inclusion of this measure (results available upon request from the first author).

## Parolee residential mobility

Given the important differences we detected above for the types of neighborhoods sex offenders enter, we estimated additional models which allowed our other measures in the models to vary based on sex offender status by creating interaction variables. We found consistently significant effects for our interactions of race/ethnicity and sex offender status, suggesting important differences for sex offenders by race/ethnicity (no other consistently significant effects were detected for the other interactions in the models). We next present the results including these variables cross-classified by race/ethnicity and sex offender status (Asian sex offenders are the reference category in these models).

Turning to the results for the neighborhoods upon re-entry, whereas African American sex offenders enter neighborhoods with less concentrated disadvantage than other African American parolees, sex offenders of the other race/ethnicities enter neighborhoods with more concentrated disadvantage than same-race parolees who are not sex offenders, as seen in model 1 of Table 3. Thus, the gap in the level of concentrated disadvantage between sex offenders and non-sex offenders in standard deviations is .08 for Latinos and .11 for whites. These gaps for residential instability in model 2 are .03 for African Americans, .09 for Latinos, .12 for whites, and .35 for Asians. These effects are particularly strong for Asians, as an Asian parolee who is not a sex offender enters neighborhoods with *less* residential instability than any of these race/ethnicity and sex offender cross-classifications, whereas Asian sex offenders enter neighborhoods with *more* residential instability than any of these other cross-classifications.<sup>6</sup> In the model with racial/ethnic heterogeneity as the outcome we see in model 3 that Latino sex offenders are more likely to enter neighborhoods with more heterogeneity than Latino non-sex offenders ( $\beta=.07$ ); differences by sex offender status are not detected for the other race/ethnicities.

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<sup>6</sup> We have limited statistical power to detect effects for Asian sex offenders given that there are just over 100 in our sample. Thus, this was the only effect between Asian sex offenders and non-sex offenders that was statistically significant.



<<<Table 3 about here>>>

When analyzing subsequent residential moves after release from prison in model 4 in Table 3 we see that only white and Latino sex offenders are moving into neighborhoods with more concentrated disadvantage. The difference in the level of concentrated disadvantage in the new neighborhood between sex offenders and non-sex offenders in standard deviations is .07 for whites and .05 for Latinos. For subsequent moves, the gaps in residential instability range from .04 to .09. However, there is little evidence that these subsequent moves take sex offenders of a particular race/ethnicity into neighborhoods with more racial/ethnic heterogeneity than non-sex offenders.

Although we found minimal effects for the racial/ethnic heterogeneity of the tracts to which sex offenders return or subsequently move, we tested whether sex offenders cross-classified by race/ethnicity are more likely to enter neighborhoods with different racial/ethnic compositions by estimating models with the percentage of a particular race/ethnicity in the tract (African American, Latino, or white) as the outcome. Controlling for the same measures as the models in Tables 2 and 3, we see that a white sex offender compared to a white non-sex offender is entering neighborhoods with 1.1 percentage points more African Americans, 2.2 percentage points more Latinos, and 2.8 percentage points fewer whites, as seen in models 1-3 in Table 4. They are also moving into neighborhoods with more racial/ethnic minorities and fewer whites upon subsequent moves, as seen in models 4-6. Among Latinos, sex offenders enter neighborhoods with 1.6 percentage points more African Americans and 2.2 percentage point fewer Latinos than do non-sex offenders.

<<<Table 4 about here>>>

## **Conclusion**

Although some prior research has explored the residential mobility patterns of the general population into less disadvantaged neighborhoods (particularly as measured by the level of poverty in the neighborhood) we have focused here on the sub-population of returning offenders and looked at their mobility into neighborhoods as measured along the three key structural determinants of neighborhood social disorganization: concentrated disadvantage, residential instability, and racial/ethnic heterogeneity. The findings utilizing this unique dataset of California parolees released during 2005-06 and geocoded to census tracts provide insight into the special challenges faced by this sub-population in trying to achieve residence in less socially disorganized neighborhoods. An advantage of studying California is that this relatively racially/ethnically mixed state provides an opportunity to move beyond studies focusing only on blacks and whites to also view Latinos and Asians. We found evidence consistent with the notion that sex offenders' mobility options are particularly limited.

Notably, even though we found minimal evidence that long-termers and serious/violent parolees tend to move into more disadvantaged neighborhoods compared to other parolees, we did observe relatively strong effects for sex offenders. Sex offenders experience a particularly pernicious downward cycle in neighborhood quality: not only are they released into neighborhoods with more concentrated disadvantage and residential instability than other parolees, but they also move into worse neighborhoods based on these dimensions with each move. This pattern for sex offenders suggests that laws limiting their access to certain types of neighborhoods may make it even more likely that they will move into disadvantaged and residentially unstable neighborhoods. This steering effect may also have long-run implications for such neighborhoods if it leads to a clustering of sex offenders in the most socially disorganized neighborhoods. Given that prior research suggests that such neighborhoods are

## Parolee residential mobility

least able to provide social control and collective efficacy that might diminish the possibility of re-offending by such offenders (Hipp, Petersilia, and Turner 2010; Kubrin and Stewart 2006; Morenoff, Sampson, and Raudenbush 2001; Sampson and Raudenbush 1999; Sampson, Raudenbush, and Earls 1997), this may well have important policy implications.

Paralleling studies viewing the general population, we also found that racial/ethnic minority parolees enter the most disadvantaged neighborhoods, implying that the same discriminating social processes are at work even in the sub-population of returning offenders. It is notable that this effect was particularly strong for African Americans: not only are they entering worse neighborhoods after release from incarceration—which may simply represent a return to the type of neighborhood they resided in before arrest—but they are also moving into worse neighborhoods with each residential move (even controlling for the characteristics of their previous neighborhood). They return to and subsequently move into even more economically disadvantaged neighborhoods compared to other racial/ethnic minority groups, and also return to and move into more residentially unstable and racially/ethnically heterogeneous neighborhoods. Whereas Latinos also return to and move into more economically disadvantaged neighborhoods than white parolees, these neighborhoods had no more residential stability and actually had less racial/ethnic heterogeneity. Given the impact economically disadvantaged neighborhoods have on recidivism (Hipp, Petersilia, and Turner 2010; Kubrin and Stewart 2006), these results suggests an additional challenge for minority parolees trying to reintegrate into society.

Given the dual importance of sex offender status and race/ethnicity, we also extended our analyses by cross-classifying these two statuses. Our findings suggested that the residential mobility experience of sex offenders of different race/ethnicities differs. For instance, perhaps because African American parolees in general move to such disadvantaged neighborhoods, sex offender status for this group makes little difference in the qualities of their neighborhoods. In

## Parolee residential mobility

contrast, whereas white parolees generally experience the least disadvantaged neighborhoods among all parolees, white sex offenders both return to, and subsequently move into, neighborhoods with more concentrated disadvantage than white parolees who are not sex offenders. Likewise, we found that the residential instability of the neighborhoods that Asians return to differs considerably based on the sex offender status of the parolee: Asian sex offenders return to neighborhoods that experience extremely high levels of residential instability.

We also saw that sex offenders are differentially likely to enter neighborhoods with varying racial/ethnic compositions. For both white and Latino parolees, sex offenders are less likely to return to or move into neighborhoods with more white residents, and more likely to enter neighborhoods with more racial/ethnic minorities. Thus, sex offenders are more likely to enter neighborhoods with particular racial/ethnic compositions even in a time period before the enactment of laws that further constrain their residential mobility options.

Our findings have several policy implications. Comprehensive release planning, with a focus on establishing stable housing options, could assist offenders leaving prisons in finding housing in better neighborhoods and reduce the likelihood of subsequently moving to more disadvantaged neighborhoods. This would require correctional and community supervision agencies to build competence in assisting offenders with finding stable housing. Our results suggest that particular attention should be focused on the barriers that minority offenders encounter when attempting to obtain stable housing in less disadvantaged neighborhoods. Communities to which offenders return may also wish to devote resources to creating additional housing options for returning offenders, with an eye toward reducing the clustering of offenders in the most disadvantaged neighborhoods. This could mitigate both the negative effects on neighborhoods of high concentrations of returning offenders as well as the negative effects on the recidivism of returning offenders from living in socially disorganized neighborhoods.

## Parolee residential mobility

Finally, policies for the management of sex offenders in communities that restrict their housing options, such as residency restrictions, may have the unintended consequence of pushing them into more socially disorganized neighborhoods. If this makes them more likely to re-offend, and past research indicates that this is a very real possibility (Hipp, Petersilia, and Turner 2010; Kubrin and Stewart 2006), the net effect on public safety of residency restriction policies for sex offenders may be negative. This is an area that needs further investigation, and may require the reconsideration of sex offender policy based on the results of such further investigation.

Certain limitations of our study should be acknowledged. First, our data only contained information on parolees and their residential mobility for one state. While these data provided key information on the types of neighborhoods parolees are re-entering after prison, and the types of neighborhoods they are subsequently moving to, the generalizability of our findings hinges on the extent to which this state is representative of other states. Although California is a large state, confidence in the findings will therefore be increased by replications on other states. Second, our data were limited to two recent years. Our ability to generalize our findings to other time points thus should be treated with caution. Third, our data cover the time period when residency restrictions for sex offenders were first being implemented in the state. Thus, we might expect to see even more marked findings with more recent address information. Fourth, we lacked information on whether the first residence following prison was a halfway house or other type of facility (e.g., drug treatment). Such a residence would be relatively impermanent, and not necessarily representative of the parolee's "true" neighborhood. A useful direction for future research would test the extent to which such residences alter the residential mobility "trajectory" of parolees.

## Parolee residential mobility

Despite these limitations, it should be highlighted that the uniqueness of our data allowed us to explore important questions that have not heretofore been addressed. With more parolees returning to neighborhoods after a long period of mass incarceration, understanding how they are able to move between neighborhoods is crucial. Our findings highlight that sex offender status is a particularly powerful force, resulting in entering disadvantaged and residentially unstable neighborhoods after release from prison as well as moves into worse neighborhoods over time. This implies deleterious consequences for such neighborhoods over time as they experience a greater clustering of disadvantage, relative instability, and sex offenders. Understanding how neighborhoods evolve over a period of time will require understanding the role returning parolees play in that process.

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## Tables and Figures

**Table 1. Summary statistics of characteristics of California parolees released during 2005-06, and the characteristics of their neighborhoods**

	Characteristics of tracts in which parolees reside		Characteristics of all tracts in California		Characteristics of parolees not geocoded	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
<b>Neighborhood characteristics</b>						
Concentrated disadvantage (factor score)	0.74	1.01	0	1		
Residential stability (factor score)	-0.40	0.94	0	1		
Racial/ethnic heterogeneity	22.17	15.48	17.81	16.68		
Percent African-American	10.23	13.90	6.29	11.39		
Percent Latino	39.14	24.04	30.91	25.62		
Percent white	38.38	26.57	48.32	28.22		
<b>Parolee characteristics</b>						
Age	35.57	9.77			35.92	9.62
White	39.3%				43.6%	
African-American	28.3%				24.5%	
Latino	28.3%				27.1%	
Asian	0.6%				0.7%	
Other race	3.5%				4.1%	
Female	13.6%				11.6%	
Sex offender	9.9%				8.5%	
Days in CDCR institution	1,184.8	1,252.3			1,085.3	1,171.0
Number of prior violent offenses	0.33	0.79			0.28	0.73
Number of prior property offenses	0.35	0.71			0.34	0.70

*N* = 220,572 move spells

Parolee residential mobility

Table 2. Predicting neighborhood level of concentrated disadvantage, residential instability, and racial/ethnic heterogeneity for first residence after custody release and for subsequent moves, based on characteristics of parolee

	Outcome: characteristic of census tract					
	First residence after prison release			New neighborhood after move		
	(1)	(2)	(3)	(4)	(5)	(6)
	Concentrated Disadvantage	Residential Stability	Racial/ethnic heterogeneity	Concentrated Disadvantage	Residential Stability	Racial/ethnic heterogeneity
Registered sex offender	0.062 ** (6.29)	-0.086 ** (-8.21)	0.002 (0.01)	0.026 ** (2.78)	-0.066 ** (-6.60)	-0.407 ** (-2.78)
Years in prison	0.002 † (1.91)	-0.001 (-1.21)	0.023 (1.36)	0.004 ** (3.69)	-0.004 ** (-3.01)	0.021 (1.22)
Number of prior violent offenses	-0.008 † (-1.83)	0.007 (1.44)	-0.108 (-1.59)	-0.009 * (-2.22)	0.010 * (2.05)	-0.099 (-1.52)
Number of prior property offenses	-0.009 * (-2.04)	0.006 (1.34)	0.091 (1.42)	-0.004 (-1.05)	0.007 (1.55)	0.052 (0.82)
African-American	0.405 ** (55.25)	-0.160 ** (-21.13)	3.016 ** (28.41)	0.287 ** (38.13)	-0.120 ** (-15.42)	2.017 ** (18.99)
Latino	0.155 ** (24.13)	0.008 (1.18)	-1.158 ** (-10.62)	0.111 ** (16.34)	0.020 ** (2.77)	-0.772 ** (-6.81)
Asian	0.107 ** (3.62)	0.044 (1.28)	3.261 ** (7.35)	0.029 (0.86)	0.084 * (2.21)	1.633 ** (3.35)
Other race	0.108 ** (7.45)	-0.017 (-1.08)	2.624 ** (12.03)	0.088 ** (5.72)	-0.031 † (-1.85)	1.478 ** (6.32)

(continued)

Parolee residential mobility

	Concentrated Disadvantage	Residential Stability	Racial/ethnic heterogeneity	Concentrated Disadvantage	Residential Stability	Racial/ethnic heterogeneity
Female	0.004 (0.49)	0.038 ** (4.59)	0.246 † (1.95)	0.014 † (1.88)	0.014 † (1.71)	0.343 ** (2.82)
Age (x 1000)	8.690 ** (19.24)	-6.625 ** (-14.19)	-13.224 † (-1.95)	5.397 ** (11.55)	-3.486 ** (-7.20)	3.064 (0.43)
Age squared (x 1000)	0.207 ** (7.84)	-0.170 ** (-6.10)	-0.546 (-1.29)	0.115 ** (4.08)	-0.093 ** (-3.07)	-0.697 (-1.58)
Age cubed (x 1000)	-0.012 ** (-9.27)	0.007 ** (5.39)	0.011 (0.54)	-0.005 ** (-3.28)	0.002 (1.51)	0.002 (0.08)
First move after prison release				-0.045 ** (-6.32)	0.065 ** (8.45)	-0.244 * (-2.19)
Lagged neighborhood construct				0.202 ** (50.91)	0.175 ** (46.62)	0.204 ** (54.34)
Intercept	0.330 ** (21.68)	-0.339 ** (-20.34)	30.932 ** (166.33)	0.318 ** (20.79)	-0.327 ** (-19.30)	25.592 ** (116.14)
<b>R-squared</b>	0.266	0.063	0.236	0.314	0.096	0.298
<b>N</b>	111,039	111,039	111,039	109,533	109,533	109,533

\*\*  $p < .01$  (two-tail test), \*  $p < .05$  (two-tail test), †  $p < .10$  (two-tail test). Fixed effects (by county) negative binomial regression models

Parolee residential mobility

Table 3. Predicting neighborhood characteristics for sex offenders by race/ethnicity, for first residence after custody release and for subsequent moves

	Outcome: characteristic of census tract					
	First residence after prison release			New neighborhood after move		
	(1)	(2)	(3)	(4)	(5)	(6)
	Concentrated Disadvantage	Residential Stability	Racial/ethnic heterogeneity	Concentrated Disadvantage	Residential Stability	Racial/ethnic heterogeneity
White non-sex offender	-0.132 **	0.291 **	-3.196	-0.039 **	0.002 **	-1.459
White registered sex offender	-0.020 **	0.171 **	-3.253	0.029 **	-0.081 **	-1.302
African-American non-sex offender	0.285	0.123	-0.148	0.261 **	-0.124	0.705 **
African American registered sex offender	0.255	0.096	-0.526	0.215 **	-0.159	-0.385 **
Latino non-sex offender	0.026 **	0.298 **	-4.431 **	0.074 **	0.021 **	-2.166
Latino registered sex offender	0.109 **	0.203 **	-3.427 **	0.120 **	-0.049 **	-2.601
Asian non-sex offender	-0.018	0.351 **	0.067	-0.002	0.086	0.221
Asian registered sex offender	0.000	0.000 **	0.000	0.000	0.000	0.000

\*\*  $p < .01$  (two-tail test), \*  $p < .05$  (two-tail test). Significance tests compare sex offenders and non-sex offenders of the same race/ethnicity. Fixed effects (by county) negative binomial regression models. Models include all variables included in models in Table 2.  $N = 111,039$  in models 1-3, and 109,533 in models 4-6.

Parolee residential mobility

Table 4. Predicting racial/ethnic composition of neighborhood for sex offenders by race/ethnicity, for first residence after custody release and for subsequent moves

	Outcome: characteristic of census tract					
	First residence after prison release			New neighborhood after move		
	(1)	(2)	(3)	(4)	(5)	(6)
	Percent black	Percent Latino	Percent white	Percent black	Percent Latino	Percent white
White non-sex offender	-0.923 **	-3.791 **	8.885 **	-2.255 **	-6.396 **	10.133 **
White registered sex offender	0.143 **	-1.554 **	6.101 **	-1.648 **	-4.532 **	7.599 **
African-American non-sex offender	8.481	0.352	-4.659 **	3.472	-3.533	1.501
African American registered sex offender	8.073	0.343	-3.579 **	3.559	-3.625	2.182
Latino non-sex offender	-0.991 **	7.763 **	-2.640	-2.195 *	1.410	2.506
Latino registered sex offender	0.638 **	5.513 **	-2.046	-1.672 *	0.816	2.649
Asian non-sex offender	0.667	-0.456	-3.345	-1.221	-4.858	2.893
Asian registered sex offender	0.000	0.000	0.000	0.000	0.000	0.000

\*\*  $p < .01$  (two-tail test), \*  $p < .05$  (two-tail test). Significance tests compare sex offenders and non-sex offenders of the same race/ethnicity. Fixed effects (by county) negative binomial regression models. Models include all variables included in models in Table 2.  $N = 111,039$  in models 1-3, and 109,533 in models 4-6.

Figure 1. Marginal effect of age on concentrated disadvantage of first tract after release

