Neighborhoods, Race, and Recidivism:
The Community-Reoffending Nexus and its Implications for African Americans

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Abstract: In this study we explore the impact of neighborhoods on criminals and of criminals on neighborhoods with respect to a current pressing problem—prisoner reentry. First, we review the key issues surrounding prisoner reentry in a “get tough on crime” era and describe the multiple challenges ex-offenders face upon release. We pay particular attention to the group affected most by these challenges—young Black males. Second, we examine trends in reoffending and link rising recidivism rates to current criminal justice policies and practices. Third, we determine how recidivism may be linked to the neighborhoods where prisoners return. Using data on a sample of ex-offenders in Multnomah County, Oregon in conjunction with Census data, we show how one critical community characteristic—neighborhood socioeconomic status—accounts for variation in the reoffending behavior of ex-prisoners that is not explained by their individual-level characteristics. Fourth, we consider whether the linkage between residence and recidivism may be conditioned by race. And finally, we discuss the policy implications by stressing the need to focus on communities as one part of a larger plan for reducing recidivism.

Keywords: neighborhoods, prisoner reentry, race, recidivism

Reentry is not just about individuals coming home; it is also about the homes and communities to which ex-prisoners return. (Dina R. Rose and Todd R. Clear from Travis and Waul, 2003: 337)

Introduction

Over the past three decades, the American government has consistently amplified the use of incarceration. In 1974 approximately 1,819,000 US adults had served time in state or federal prisons but by 2001 this number had increased threefold to about 5,618,000 men and women. In 2004 alone,
over two million individuals were incarcerated in prisons and local jails or correctional centers, and for the first time over 100,000 women were housed in prisons (Harrison and Karberg, 2003).

Given these trends, more inmates are being released from prison than ever before. About 600,000 individuals will be released any given year (roughly 1600 per day) to return to their communities (Travis et al., 2001:1). Although the transition from prison to society has always been difficult, released inmates currently face greater challenges and obstacles than in the past. Today prisoners return home having spent longer prison terms behind bars. They are less prepared for life on the outside. And they receive little assistance in their reintegration. At the same time, many return to socially disorganized communities with limited resources, job opportunities and social services. As a result, prisoner reentry has become one of the most salient problems in criminal justice today, the central question being, how many of these offenders will reoffend and why?

Previous research on recidivism has found that men, younger offenders, those who commit more serious offenses, have prior convictions, are closely supervised during probation/parole, have drug problems and have little education are more likely to recidivate, controlling for other factors (Benedict and Huff-Corzine, 1997; Benedict et al., 1998; Clarke et al., 1988; Gainey et al., 2000; Gendreau et al., 1996; Hepburn and Albonetti, 1994; Irish, 1989; Listwan et al., 2003; MacKenzie et al., 1999; Schwaner, 1998; Spohn and Holleran, 2002; Ulmer, 2001). Many studies also find that even after controlling for offense and other demographic characteristics, minorities, and particularly African Americans, are more likely to reoffend than Whites (Benedict and Huff-Corzine, 1997; Clarke et al., 1988; Gendreau et al., 1996; Hanley and Latessa, 1997; Listwan et al., 2003; Spohn and Holleran, 2002).

Almost none of these studies, however, document the types of neighborhoods prisoners are released into or take into account whether ex-offenders disproportionately return to distressed communities. As Rose and Clear’s quote at the beginning of the essay implies, “place” is fundamental to our understanding of why people reoffend yet very little attention has been given to how ecological characteristics of communities influence the reoffending behavior of prisoners and consequently, the opportunity structure they and their neighbors encounter.

This essay begins to move us in that direction. Here we explore the impact of neighborhoods on criminals and the impact of criminals on neighborhoods with respect to a current pressing problem—prisoner reentry. First, we review the key issues surrounding prisoner reentry in a “get tough on crime” era and describe the multiple challenges ex-offenders face upon release. We pay particular attention to the group affected most by these challenges—young Black males. As will be shown, the prevalence of
incarceration has not been equally distributed among racial groups; Black men, especially uneducated, young, Black men, are much more likely to experience prison than other groups (Lynch and Sabol, 2001: 12). For this reason, they face special obstacles for reintegration. Equally important, the spread of incarceration throughout Black communities—many of which already face multiple disadvantages—poses a unique reentry challenge. Second, we examine trends in reoffending among those released and link rising recidivism levels to current criminal justice policies and practices. Third, we advance previous research by considering how recidivism may be linked to the neighborhoods where prisoners return. As we argue below, neighborhoods vary in their capacity to provide services to ex-offenders, resources that facilitate reintegration into society and curb recidivism. As a consequence, recidivism levels may be determined, in part, by the places to which ex-offenders return. In this section, we present findings from a study that empirically tests this idea. Using data on a sample of ex-offenders in Multnomah County, Oregon in conjunction with Census data, we show how one critical community characteristic—neighborhood socioeconomic status—accounts for variation in the reoffending behavior of ex-prisoners that is not explained by their individual-level characteristics. Fourth, we consider whether the linkage between residence and recidivism may be conditioned by race. In other words, we theoretically assess whether higher recidivism rates among Blacks may be explained, in part, by the fact that they disproportionately return to (and live in) more economically disadvantaged communities compared to Whites. Finally, we discuss the policy implications by stressing the need to focus on communities as one part of a larger plan for reducing recidivism.

**Prisoner Reentry in a “Get Tough on Crime” Era**

Prisoner reentry is very different than just a few decades ago. Today there are many more offenders released from prisons than in the past and they have served significantly longer prison terms, with only few having received the benefits of extensive rehabilitation or prerelease programs (Seiter and Kadela, 2003: 361). These trends reflect, in part, the criminal justice system’s transformation in philosophy from that of rehabilitation to punishment. On the state of contemporary crime policy, Beckett (1997) notes that the two major policy perspectives have been get-tough and managerial approaches. Both are “cynical sides of the same coin,” she says because they are “fundamentally uninterested in the social causes of criminality or in reintegrating offenders and assume instead that punishment, surveillance, and control are the best response to deviant behavior” (1997: 107). The result has been that more behaviors are now penalized and penal-
ties for crimes have become much harsher, as reflected in criminal justice legislation over the last three decades.

Since the early 1980s, criminal justice policy has become increasingly punitive, with each administration calling for tougher penalties, mandatory penalties, lengthier sentences, more prisons and reduced habeas corpus rights (e.g. the right to due process in criminal proceedings). To illustrate, in 1993, the US Senate passed a $23 billion crime bill that, among other things, made being a member of certain types of gangs a federal offense and expanded the death penalty to cover 52 additional offenses. The bill also classified street crimes involving firearms as a federal offense and contained the “three strikes and you’re out” provision, which calls for mandatory sentences for persons convicted of three felonies. The War on Drugs, with a budget of only $1 billion in 1981 but $13.4 billion in 1993 and nearly $20 billion in 2002, perhaps is the paradigm of get tough policy. Between 1980 and 2003, the USA spent more than $300 billion on federal, state and local anti-drug efforts. Mandatory penalties for drug crimes have proliferated and are now the harshest in the nation’s history. Collectively, the various laws have had three severe consequences. First, during the past 20 years the USA experienced a massive boom in incarceration with the prison population increasing fourfold from 330,000 in 1980 to nearly 1.4 million in 1999. As a result, the USA now incarcerates more of its citizens than any other country in the world (Austin and Irwin, 2001: 1; Lynch and Sabol, 2001: 4). Second, federal and state budgets have shifted public expenditures from other social services such as education to crime control (Chambliss, 1995; Tonry, 1995). In California, for example, the 2002 state budget showed that 18 percent of funds were spent on corrections while only 1 percent was spent on higher education (Whitehead et al., 2003). And third, racism and the systematic oppression of minorities, especially young African-American men, has been legitimized and institutionalized in the criminal justice system (Chambliss, 1995: 236).

Various statistics detail the extent to which these policies have adversely affected Blacks. Since 1980 the number of Blacks in prison has tripled (Tonry, 1995: 49). Black incarceration rates in 1990 (1860 per 100,000) were nearly seven times higher than White rates (289 per 100,000) (Jankowski, 1992: Table 16). And one study reported the following: almost 1 in 3 (32.2 percent) African-American men ages 20–29 is either in prison, jail, probation or parole on any given day (Mauer and Huling, 1995). Unfortunately, these disparities continue to worsen; the incarceration rate for Blacks today (3437 per 100,000) still far exceeds that for Whites (450) (Sourcebook of Criminal Justice Statistics, 2002: 500). Projections indicate that these inequalities will continue. Bonczar and Beck (1997) estimate that 28.5 percent of Black males born in 1991 can expect to enter state or
federal prison during their lifetime. For White men, in contrast, the lifetime likelihood is only 4.4 percent.

Even more alarming are arrest and incarceration statistics for drug offenses, fueled by the War on Drugs. The absolute number of drug arrests grew from the 1970s to the 1990s but the percentage of drug arrests for Blacks rose most sharply. Between 1985 and 1989 the number of Black arrests increased by more than 100 percent from 210,298 to 452,574, while the number of White arrests grew by only 27 percent (Sourcebook of Criminal Justice Statistics, 1985–1989). Drug arrests are a principal reason for the rapid increase in Black imprisonment: in 1926, the first year that the race of prison admissions was recorded on a national basis, only 21 percent of all admissions were African American but by 1970 that figure grew to 39 percent and by 1996 it grew even further to 51 percent (Austin and Irwin, 2001: 7).

Not only are more persons, particularly minorities, entering the criminal justice system in greater numbers than ever before, they are serving longer sentences as a result of “truth in sentencing” and related policies. Previously, under an indeterminate system, parole boards could release inmates if they showed signs that they were rehabilitated, documented established ties to the community (e.g. housing, family, employment) and provided a “plan” on how they would successfully reenter society. Under these guidelines, offenders would still be remanded back to prison if they violated their release conditions. Many argued this system provided parolees with both an incentive not to reoffend and to develop a transition plan for reentry. With “truth in sentencing” legislation and a shift to determinate sentencing, however, inmates now serve most, if not all, of their sentences. Under the new guidelines, although offenders in most states serve an average of 85 percent of their prison sentences, about 20 percent of this group serves 100 percent of their sentences. As a result, the average prison term served today is 2.4 years, over seven months longer, on average, than a decade ago. Unfortunately, studies find that longer stays in prison are associated with declining frequency of contact with family members, contact that is critical in aiding reintegration (Lynch and Sabol, 2001). Additionally, the likelihood of being divorced increases with time served. Many also argue that with a shift toward determinate sentencing, the incentive for inmates to prepare for release is reduced since they know they cannot achieve an early release date despite following prison rules, attending educational classes, and receiving treatment. Unfortunately, when inmates do not participate in educational programs or receive other services while incarcerated, they reenter communities no more equipped than when they first arrived.
Challenges of Returning Home

These same offenders eventually return home to communities throughout the USA. In fact, over 95 percent of more than 2 million inmates who are currently incarcerated will return to their communities. In 2004 alone roughly 650,000 inmates—about 1780 per day—were released nationally from prisons (Elsner, 2005). The volume of offenders released from prison has increased dramatically from 1980 to 2000, from about 170,000 to 585,000 (Lynch and Sabol, 2001: 2).

Upon release, a significant number of offenders are in critical “need of help,” as a 2005 Urban Institute report noted in its title. Challenges for prisoner reentry include, but are not limited to, substance abuse problems, physical and mental health problems, employability and workforce obstacles, housing issues, and simply overcoming the stigma associated with being an ex-felon. Visher et al. (2005: 2) note that among those released in 2004 is a group of prisoners with serious medical and mental health problems. In their study of 81 male prisoners returning to Cincinnati communities, they found that inmates reported long waits to see a doctor and insensitive, uncaring treatment from many of the prison doctors and nurses; after release, ex-prisoners said that the lack of information provided to them about community services was the biggest obstacle to getting the health care and other services needed; former prisoners reported having to rely on family, friends, and even the emergency room of the local hospital to obtain the medication they needed after release (2005: 3). Unfortunately, these problems are not limited to one city. Studies of other cities report similar obstacles to the delivery of health care services, both within prison and after release (LaVigne et al., 2004: 29, 37; Travis et al., 2001: 13; Visher et al., 2004).

Health care is arguably most important for those with substance abuse problems; a sizable percentage of inmates today. Studies of inmate populations find that a significant proportion report extensive and serious drugs and alcohol involvement. In a study of prisoner reentry in Maryland, for example, the majority of inmates reported some alcohol (61 percent) or drug (78 percent) use prior to prison, with cocaine and heroin topping the list. Moreover, 30 percent reported using cocaine and 41 percent reported using heroin on a daily basis in the six months before entering prison (Visher et al., 2004: 7). In their study of 400 inmates returning to Chicago communities, Visher et al. (2003: 3) also note that substance abuse was prevalent among their sample yet very few ex-offenders had received treatment while incarcerated. A 2005 report on prisoner reentry in Texas arrived at a similar finding; among 676 prisoners interviewed shortly before release, it was determined that 80 percent reported illegal drug use prior to their incarceration yet only 21 percent participated in a treatment program while incarcerated (LaVigne and Kachnowski, 2005: 1).
Securing employment constitutes another critical barrier for ex-offenders, particularly in an economy increasingly diverging into a high skills/high technology sector and a broad, low skill service economy. Few offenders have promising prospects for advancing out of the bottom rungs of the job ladder, and as Mauer (2005: 609) notes: “What in many cases is a situation of limited connections with the world of work becomes even more problematic with the stigma of imprisonment attached to former offenders.”

These employment challenges and barriers may be particularly onerous for minorities. The joint effects of race and a prison sentence as they relate to employer discrimination do not portend well for Black ex-prisoners. Indeed recent research has found that it is easier for a White person with a criminal record to get a job than a Black person with no record, even among applicants with otherwise comparable credentials (Pager, 2003). One can imagine, therefore, the challenges that Black ex-offenders face in terms of securing employment post-prison.

Not surprisingly, many post-release obstacles are related to, and compounded by, initiatives of the War on Drugs, with an increasing series of restrictions placed on people convicted of drug offenses. Depending on the state in which one lives, an 18-year-old with even a first-time conviction for felony drug possession now may be barred from receiving welfare benefits for life, prohibited from living in public housing, denied student loans to attend college, permanently excluded from voting, and if not a citizen, deported (Mauer, 2005: 610).

The problems ex-offenders face when returning home have begun to receive some attention. But virtually no attention has been given to the challenges that communities face as these ex-offenders are reintegrated. For communities, the return of prisoners potentially poses problems for public safety, provisions of social services, and challenges for reintegrating residents. The increase in the sheer number of offenders returning home with progressively more serious needs after having served longer sentences places an insurmountable strain on some urban communities. Discussions about the return of ex-prisoners into communities often occur under the presumption that communities want to accept and reintegrate ex-offenders, yet this may not be a viable assumption. Surveys of residents in local neighborhoods show that public safety is their top concern (e.g. Anderson and Milligan, 2001). And given that some offenders have committed serious violent crimes, it is not necessarily the case that neighborhoods want all offenders to return to the places they lived before serving time.

These concerns are exacerbated for the communities with large concentrations of returning prisoners. Certain neighborhoods—those already facing enormous challenges of poverty, crime, lack of social services—are particularly burdened by the large influx of inmates returning home. Released prisoners are concentrated in a few large states (e.g. California,
Texas). The top 16 states (in terms of the volume of releases) collectively account for 75 percent of all those who leave prison. Of those released in 1998, for example, five states accounted for just under half of the 531,000 offenders; California alone accounted for 24 percent of the state prison releases (but only 12 percent of the US resident population) (Lynch and Sabol, 2001: 15). More importantly, within these states, ex-prisoners are increasingly concentrated in the core counties, or areas that contain the central city of a metropolitan area. Some cities witnessed particularly high levels of returnees. For example, in 2002, more than 10,000 convicted felons completed their sentences and returned to the streets of Baltimore (Buntin, 2003). Studies further suggest that releases are concentrated within a comparatively few neighborhoods in those cities (Lynch and Sabol, 2001: 3; Rose and Clear, 1998; Visher et al., 2004).

The Criminal Justice System’s Revolving Door

Given these conditions, it should not be at all surprising that many who leave prison end up returning shortly after release, usually within a year. Mark Souder, a Republican congressman from Indiana, noted that recidivism has turned the US justice system into a revolving door and represents a “massive failure of the penal system to return law-abiding citizens to society” (Elsner, 2005). Studies report recidivism levels usually around 30–35 percent (Benedict and Huff-Corzine, 1997; Clarke et al., 1988; Irish, 1989), although some report levels as high as 43 percent (Langan and Cunniff, 1992). These figures are much higher in studies that measure longer release times; in one study of 272,111 prisoners released from prisons in 1994, it was noted that 68 percent were rearrested for a new crime in three years (Langan and Levin, 2002). Studies report differences in recidivism by type of offender population; offenders sentenced to prison have higher recidivism rates and recidivate more quickly than do offenders placed on probation (Spohn and Holleran, 2002: 329; see also Clear and Braga, 1995; Petersilia et al., 1986), although recidivism is still fairly common for probationers and parolees. MacKenzie and Li (2002: 243) note that these populations account for a large proportion of the criminal activities in large, urban areas, and many probationers and parolees are rearrested within three years of starting supervision. Consider the following statistic. During 1998, there were 170,253 reported parole violators nationwide, representing more than 23 percent of new prison admissions (Beck and Mumola, 1999). What accounts for such high levels of reoffending?

As noted earlier, studies document that those who have committed more serious crimes, have more prior offenses, drug problems, little education, and higher supervision rates during probation/parole are more likely to
recidivate, controlling for other factors. Men and younger offenders also recidivate more often. Many of these studies also find that even after controlling for these factors, minorities—and particularly Blacks—reoffend at a greater rate than Whites. In fact, a meta-analysis of over 130 studies on the predictors of recidivism among adult offenders found race to be one of the strongest predictors (Gendreau et al., 1996: 575).

Notably absent from this long list of studies are measures reflecting the neighborhood contexts in which individuals live. These studies fail to document the types of neighborhoods offenders are released into and thereby treat neighborhood context as constant and therefore irrelevant for understanding recidivism. Yet neighborhoods vary drastically in the amenities or privileges that residents can enjoy. Some communities have low poverty and unemployment levels, ample and quality housing supply, relatively little residential turnover, little crime and offer an abundance of services. Others are crime ridden with poverty, unemployment and residential instability, and offer residents few, if any, services. While individual-level factors do play an important role in predicting who will reoffend versus who will not, one’s immediate environment is also likely to have a significant influence on rates of recidivism, as social disorganization theory predicts.

Social Disorganization and Recidivism

Social disorganization theory provides a framework for understanding how neighborhood structure influences individual behavior. Unlike theories centered on individual-level contributors to crime and recidivism, social disorganization focuses on the effects of places in creating conditions favorable to criminal behavior (Kubrin and Weitzer, 2003). This perspective describes how certain features of the urban environment such as poverty, racial and ethnic heterogeneity, and residential instability lead to high levels of social disorganization in communities. Neighborhoods that are socially disorganized, that have high levels of poverty, unemployment, family disruption, population turnover and other social ills, are more likely to experience greater crime and victimization rates, primarily because they have lower levels of informal social control.

A number of social disorganization studies find that crime-related dynamics operate at the neighborhood level that are not reducible to the individual characteristics of residents. A basic premise of this research is that individual rates of offending are determined to some extent by social forces in the wider environment, and that social disorganization theory provides a basis for identifying these criminogenic conditions. It is argued that neighborhood characteristics will have a direct impact on individual rates of offending, even after controlling for individual-level factors such
as race, gender, age, socioeconomic status, and others. It is also the case, however, that the relationship between individual-level factors and crime rates may be conditioned by, or vary with, the broader social context (Rountree et al., 1994: 390), constituting an interaction between community- and individual-level characteristics.

In recent years, studies have examined how neighborhood characteristics directly affect, or interact with, individual-level factors to influence a variety of outcomes including victimization (Miethe and McDowall, 1993; Rountree et al., 1994; Velez, 2001), adolescent development (Elliott et al., 1996), delinquency (Simcha-Fagan and Schwartz, 1986; Wikstrom and Loeber, 2000) and violence (Sampson et al., 1997; Silver, 2000). The findings indicate that even after controlling for individual-level characteristics, neighborhood factors influence individuals’ likelihood of victimization or offending. They also indicate that certain neighborhood characteristics such as poverty and unemployment interact with characteristics of individuals to aggravate victimization and offending rates.

Unfortunately, almost no studies have examined how neighborhood characteristics affect the experiences of ex-offenders. Yet poverty, family disruption, joblessness and residential instability—indicators of neighborhood social disorganization—represent conditions that make readjustment into society and one’s neighborhood more difficult, and thus may contribute to a greater likelihood of re offending for those just released. Given that most offenders return home with serious medical, physical and social problems as described earlier, neighborhoods and the resources they contain are critical determinants of recidivism.

Ex-offenders also rely on neighborhood resources in order to comply with the terms of their probation/parole. Frequently offenders are required to hold a job, receive counseling, find housing, etc. as part of their probation/parole. Over the years, the proportion of ex-offenders subject to special conditions such as residential placement, alcohol and drug abuse treatment, drug testing, mental health counseling, house arrest, day programs and community service has risen (Clear, 1994). The public’s more punitive stance, combined with availability of inexpensive drug testing and a higher number of probationers having substance abuse problems, have contributed to the increased number of conditions imposed. Often offenders must rely on help from the community to successfully comply with the terms of their supervision. Essentially, successful completion of community supervision requires access to services which facilitate compliance to these rules yet not all neighborhoods offer these services and some, particularly disorganized communities, offer almost none at all.

In the next section we empirically test the idea that one important aspect of neighborhood context—socioeconomic status—matters for recidivism above and beyond the individual-level factors of ex-offenders.
Neighborhoods and Recidivism: An Empirical Test

We use data from individuals on community supervision in Multnomah County (Portland and surrounding areas), Oregon in 2000 and Census data. To obtain data on ex-prisoners, a list of offenders admitted to community supervision between 1 January and 30 June 2000 was obtained from the Oregon Department of Corrections, the state’s repository for all community supervision data. An admission was defined as an offender admitted to supervision: (1) due to a new crime for which a sentence of probation was given; (2) after serving a prison sentence with additional time to serve on parole or post-prison supervision; (3) upon returning to active supervision after previously absconding; or (4) upon moving into Multnomah County from active supervision in another jurisdiction. These conditions, in combination, capture the population of offenders newly exposed to community supervision during the six-month period in 2000 (n = 5002).

Once the sample was identified, a variety of data on the individuals were obtained from several criminal justice agencies. The Multnomah County Department of Community Justice provided data on offender characteristics (e.g. sex, age, race) offense characteristics (e.g. current offense, number of prior arrests), and risk/supervision level (e.g. low, medium, high) while on probation. Data on the use of sanctions were extracted from the Department of Correction’s Sanctions Tracking Database, which contains information on whether or not each ex-offender committed a sanctionable offense during the study period. Finally, information on arrests while on supervision was obtained from the data warehouse, Decision Support System – Justice, which contains integrated, individual-level data from law enforcement agencies (Portland Police Departments and the Multnomah County Sheriff), the District Attorney, and the Courts. The Decision Support System – Justice provided arrest data for each offender in the sample one-year post release date.

Post-charge addresses were identified for ex-offenders in the sample. The post-charge address captures the first known housing location of ex-offenders after release.1 We used ArcView GIS to match home address information with 2000 Census data to determine the Multnomah County Census tract in which each individual was located. In this study, Census tracts serve as proxies for neighborhoods.2 There are 170 Census tracts in Multnomah County although 14 either had no releasees or were non-residential tracts (e.g. parks), and thus were excluded from the analyses. Our final sample size includes 4630 ex-offenders living in 156 neighborhoods.3
Recidivism

Recidivism has been defined in a number of ways and measured with a variety of indicators. The focus of this essay is on recidivism among persons released from prison, on probation, parole or other forms of correctional supervision. In this case, recidivism typically refers to persons who are rearrested, reconvicted or reimprisoned during a specified time period. In this study, we measure recidivism as a new arrest within a 12-month study period. We chose to use arrest as the indicator of recidivism because it bypasses problems associated with prosecutorial, court, and correctional data, which are not as complete or reliable as arrest data supplied by law enforcement agencies. While arrest data do not capture crimes that did not result in an arrest, the overall effect of this limitation is that the rearrest measure is conservative; that is, any errors or omissions in the data almost surely underestimate the true amount of recidivism in the sample. From a data validity standpoint, it is arguably better to underestimate this crucial variable than to overestimate it (Ulmer, 2001: 172). Moreover, Maltz (1984) examined over 90 different recidivism studies and derived nine categories used to measure recidivism: arrest, reconviction, incarceration, parole violation, parole suspension, parole revocation, offense, absconding, and probation. Maltz (1984: 66) concluded that “the recidivism definition of choice appears to be . . . arrest recidivism” (see also Blumstein and Cohen, 1979). For these reasons, we use arrest as our measure of recidivism in line with much of the research (Benedict and Huff-Corzine, 1997; Jones and Sims, 1997; Lanza-Kaduce et al., 1999; Listwan et al., 2003; Shinnar and Shinnar, 1975; Ulmer, 2001; Visher et al., 1991). Arrest is measured as a binary variable that discerns between those who were and those who were not rearrested within a 12-month follow-up period (1 = rearrested, 0 = not rearrested). Twenty-eight percent of the sample was rearrested within this period, a figure consistent with other studies (Benedict and Huff-Corzine 1997; Clarke et al., 1998; Irish, 1989).

Predictors of Recidivism

Individual-Level: As noted earlier, a number of individual-level characteristics are related to recidivism. While all of these predictors are not measured in the current study, we account for many of the most frequently examined individual-level attributes and incorporate some (e.g. new sanction) that have been excluded in prior research. Probation is measured as a dichotomous variable where the reference group is all other forms of supervision (e.g. parole, release from prison with supervision). High supervision captures the supervision level for ex-offenders; it is a dichotomous variable
where the reference group is individuals on low or medium supervision. We also include three dichotomous variables for type of offense (here offense refers to the most serious prior offense): *property offending*, *drug offending*, and *other offending*, with violent offending as the reference category. *Prior arrest* measures the number of times an individual was ever arrested. *New sanction* captures whether an individual received a new sanction within the 12-month study period (the reference category is no new sanction). We also control for gender, race/ethnicity, and age because these demographic factors have been shown to be associated with recidivism. *Female* is a dichotomous variable with males as the comparison group. *Race/ethnicity* is measured by a set of dichotomous variables with 1 = Black, 1 = Asian, 1 = Hispanic, and 1 = Native American (in each category, White is the reference group). *Age* is measured in years for each respondent. We also include a quadratic term for age in the model because the relationship between age and recidivism may be curvilinear.4

*Neighborhood-Level*: To capture neighborhood socioeconomic status, we created a measure of neighborhood disadvantage. Four census tract variables were used to form this construct: proportion of persons on public assistance, proportion of persons below the poverty level, proportion of persons unemployed, and median family income. Previous studies have used some combination of these variables to assess community socioeconomic status (Sampson et al., 1997). Factor analysis indicated that these variables load strongly on a single factor (eigenvalue of 2.49; all loadings were above 0.70) across census tracts. This construct explains 62 percent of the variance.

The neighborhoods showed substantial variability with regard to indicators of disadvantage. For example, given a range of 0–62 percent, in the least disadvantaged neighborhoods \( n = 75 \), the average poverty rate was 8 percent while in the most extremely disadvantaged neighborhoods \( n = 19 \), the average rate was 30 percent. Like poverty, there were differences in each socioeconomic indicator between the high and low disadvantaged neighborhoods.

While we control for concentrated disadvantage because it is associated with a variety of negative outcomes, focusing solely on disadvantage neglects the phenomenon of concentrated affluence, which may generate a separate set of protective mechanisms, thereby reducing negative outcomes (Brooks-Gunn et al., 1993; Massey, 2001; Morenoff et al., 2001; Sampson et al., 1999). Massey (2001) points out that researchers spend too much time focusing on the consequences of disadvantage and little time focusing on affluence, and Sampson et al. (2002: 446) further note that “the common tactic of focusing on concentrated disadvantage may . . . obscure the potential protective effects of affluent neighborhoods.” We therefore
extend our focus to include a measure that captures both the concentration of affluence and poverty.

To measure concentrated affluence and poverty, we used Massey’s (2001: 44) Index of Concentration at the Extremes (ICE) measure. The ICE measure captures the degree of concentrated affluence relative to the concentration of poverty in a neighborhood. As such, the ICE measure reflects relative inequality in a community, rather than the absolute level of disadvantage. The ICE index provides insights that go beyond those generated by the standard concentrated disadvantage measure. Whereas the disadvantage measure assesses the degree to which certain conditions (e.g. poverty, public assistance, unemployment) coexist in a neighborhood, the ICE measure reflects the degree to which persons with various levels of those conditions coexist. For a given community, the ICE index is computed using the following formula: \[(\text{number of affluent families} - \text{number of poor families}) / \text{total number of families}\], where “affluent” is defined as families with incomes two standard deviations above the mean, which equates to $67,759, and “poor” is defined as families below the officially designated poverty line. ICE provides a measure of the proportional imbalance of affluence versus poverty in a neighborhood on a scale that ranges from +1 to –1: a value of +1 indicates all families are affluent; a value of –1 indicates all families are poor; and a value of 0 indicates an equal balance of affluent and poor families (for a review see Massey, 2001; Morenoff et al., 2001).^5

**Analytic Strategy**

We used multilevel modeling techniques to examine the effects of individual- and neighborhood-level factors on recidivism. Multilevel modeling has become customary for estimating contextual effects when individuals are clustered within neighborhoods (Raudenbush and Bryk, 2002). These models explicitly recognize that individuals within a particular neighborhood may be more similar to one another than to individuals in another neighborhood and, therefore, may not constitute independent observations. Consequently, failure to account for non-independence of observations can result in standard errors that are biased downward, increasing the chances of reaching incorrect conclusions (Kreft and De Leeuw, 1999; Raudenbush and Bryk, 2002). Furthermore, multilevel modeling allows for simultaneous investigations of individual- and neighborhood-level variance components on the outcome variable of interest (e.g. rearrested), while still maintaining the appropriate level of analysis for the independent variables. We are also able to estimate the amount of variance in rearrest that exists across neighborhoods.
The most basic multilevel model adopts a two-level approach where the level-1 model is estimated separately for each group. The level-1 model takes the form of a regression-based equation; the level-2 analysis uses the intercept from the level-1 analysis as a dependent variable (Raudenbush and Bryk, 2002). In the current analyses, we estimated a random intercept, fixed slope model because our substantive interest is in whether variation in rearrest is explained by neighborhood context above and beyond individual-level predictors. Because our rearrest measure has a binary coding scheme, we estimated a series of two-level, hierarchical logistic regressions (Guo and Zhao, 2000).

Our analyses proceed in the following manner. First, we generated correlations and descriptive statistics for all variables. Second, we estimated an unconditional multilevel regression model that describes the variation in rearrest across neighborhoods. Third, we estimated an individual-level characteristics multilevel regression model. And fourth, we estimated two neighborhood contextual multilevel models to further account for variation in rearrest.

**Results**

**Descriptive Statistics and Correlations:** Table 1 presents the descriptive statistics and correlations for the variables included in our analyses. The descriptive statistics indicate that 28 percent of the sample was rearrested within a one-year period. Eighty-one percent of the sample was on probation, while 20 percent had high-level supervision. The sample is comprised of 25 percent females and the average ex-offender age is 36. Whites make up 68 percent of the sample, followed by African Americans (25 percent), Hispanics (4 percent), Asians (2 percent) and Native Americans (1 percent).

The correlations show support for several hypotheses. In particular, neighborhood disadvantage, the ICE measure, being on non-probation supervision, prior property, drug, “other” offending, prior arrests and receiving a new sanction are significantly associated with recidivism. Males and Blacks are also more likely to recidivate. To investigate these relationships more closely, we turn to the multivariate results.

**Unconditional Model:** We began by assessing the degree to which recidivism risk varies across neighborhoods. To do this, we estimated an unconditional, random analysis of variance model (i.e. a model with no predictors or control variables) that includes the intercept parameter describing the mean log odds for recidivism. Also included is a variance component that describes whether there is significant variation in rearrest across neighborhoods. The results are presented in Model 1 of Table 2.
Table 1. Correlations, means, and standard deviations among study variables

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<td>0.05*</td>
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<tr>
<td>12. Violent offending</td>
<td>-0.07*</td>
<td>-0.13*</td>
<td>-0.04*</td>
<td>0.03*</td>
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</tr>
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<td>13. Property offending</td>
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<td>0.11*</td>
<td>0.07*</td>
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<td>14. Drug offending</td>
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<td>-0.06*</td>
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<td>16. Prior arrest</td>
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<td>-0.04*</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.02</td>
<td>-0.09*</td>
<td>-0.01</td>
<td>-0.09*</td>
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<tr>
<td>17. New sanction</td>
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<td>-0.07*</td>
<td>0.07*</td>
<td>0.11*</td>
<td>-0.03*</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.02</td>
<td>-0.22*</td>
<td>-0.05*</td>
<td>0.00</td>
<td>0.03*</td>
<td>0.06*</td>
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<td>0.23*</td>
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<tr>
<td>18. ND^a</td>
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<td>-0.17*</td>
<td>0.17*</td>
<td>0.02</td>
<td>-0.02</td>
<td>-0.02</td>
<td>0.02</td>
<td>0.02</td>
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<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>0.04*</td>
<td>-0.05*</td>
<td>0.08*</td>
<td>0.05*</td>
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<tr>
<td>19. ICE measure</td>
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<td>-0.05*</td>
<td>0.16*</td>
<td>-0.16*</td>
<td>-0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.04*</td>
<td>0.01</td>
<td>0.00</td>
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<td>0.05*</td>
<td>-0.07*</td>
<td>-0.05*</td>
<td>-0.76*</td>
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Mean 0.28 0.25 0.68 0.25 0.04 0.02 0.01 34 1295.56 0.81 0.20 0.18 0.26 0.36 0.20 0.99 0.20 0.96 0.18
SD 0.45 0.43 0.47 0.43 0.18 0.14 0.12 9.89 745.13 0.39 0.40 0.38 0.44 0.48 0.40 2.27 0.40 1.08 0.23

Notes: n = 4630 within neighborhood; n = 156 between neighborhood; *< 0.05; *neighborhood disadvantage.
### Table 2. Multilevel regressions of individual- and neighborhood-level variables on recidivism (rearrested)

<table>
<thead>
<tr>
<th></th>
<th>Model 1: unconditional</th>
<th>Model 2: individual</th>
<th>Model 3: contextual: ND</th>
<th>Model 4: contextual: ICE</th>
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<tr>
<td></td>
<td>b</td>
<td>SE</td>
<td>Exp(b)</td>
<td>b</td>
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<tr>
<td>Intercept, $\gamma_0$</td>
<td>-0.96**</td>
<td>0.04</td>
<td>0.38</td>
<td>-2.62**</td>
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<tr>
<td><strong>Individual-level</strong></td>
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<tr>
<td>Female</td>
<td>—</td>
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<td>Black</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.51**</td>
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<td>Hispanic</td>
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<td>Asian American</td>
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<td>—</td>
<td>-0.84*</td>
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<tr>
<td>Native American</td>
<td>—</td>
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<td>0.94**</td>
</tr>
<tr>
<td>Age</td>
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<td>0.09**</td>
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<td>Age$^2$</td>
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<td>-0.001**</td>
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<td>1.34**</td>
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<td>Neighborhood disadvantage (ND)</td>
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<tr>
<td><strong>Random effects</strong></td>
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<tr>
<td>$\sigma^2$</td>
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<td>0.026</td>
<td>0.019</td>
<td>0.021</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>479**</td>
<td>384**</td>
<td>378**</td>
<td>379**</td>
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</table>

*Notes: *$p < 0.05; **p < 0.01; n = 4630 within neighborhood; n = 156 between neighborhood.*
The significance of the grand mean intercept (–0.96) corresponds to the mean level (0.28) of recidivism risk across neighborhoods (0.28 = \( \exp(-0.96) / (1 + \exp(-0.96)) \)). Also of importance is the significant random effects variance component of 0.053 (\( \chi^2_{(155)} = 479, p < 0.01 \)), which indicates that recidivism varies significantly across neighborhoods, and therefore, can be modeled.\(^7\) Figure 1 provides a graphical distribution of the degree of variation in recidivism risk across neighborhoods. The figure shows that risk of recidivism varies from less than 5 percent in some neighborhoods to greater than 40 percent in others.

Figure 1 raises the question of what predictors account for the differences in recidivism levels across neighborhoods. One possibility is that these differences reflect individual-level characteristics of residents. For example, it is possible that neighborhoods in which recidivism levels are high simply reflect the fact that these neighborhoods contain more ex-offenders with attributes that are predictive of recidivism (e.g. high levels of supervision, prior arrests, etc.). Conversely, recidivism risk may be greater in some neighborhoods because ex-offenders residing there are exposed to higher levels of concentrated disadvantage and inequality. In Models 2 through 4 of Table 2, we assess these possibilities.

**Level 1 (Individual-Level):** We estimated a level-1 model that included 14 individual-level characteristics related to recidivism. These results are presented in Model 2 of Table 2. The individual-level covariates are grand

![Figure 1. Distribution of recidivism levels for 156 neighborhoods](image-url)
mean centered. Each effect is adjusted for all other effects in the model.

All of the individual-level covariates, except for Hispanic, are significantly related to recidivism. Recidivism is higher among males, Blacks, Native Americans, those on non-probation supervision, those with high supervision levels, property, drug, and “other crime” (relative to violent) offenders, those with a history of prior arrests, as well as those who received new criminal sanctions. The findings also show that risk of recidivism increases with age but that this rate of increase eventually slows. These results are consistent with an extensive body of research on recidivism (Gendreau et al., 1996).

Of particular importance is the noteworthy finding that probationers are less likely to recidivate than are parolees or individuals who served their full sentence before being released with supervision. Those individuals sentenced to probation are not incarcerated and typically do not leave their neighborhoods for any extended period of time. As such, there is no true “reintegration process” that must occur. In contrast, parolees and those who have served a full sentence spend (often extended) time in prison and do face the challenges of reintegration as they return home. Given the discussion earlier, therefore, it is not at all surprising that, controlling for other factors, probationers recidivate less.

A comparison of the variance components for Models 1 and 2 indicates that individual-level characteristics account for roughly 51 percent of the variance in recidivism within neighborhoods (0.51 = 0.053 – 0.026 / 0.053). Thus, part of the explanation for why some neighborhoods exhibit higher recidivism levels is that some of the respondents have individual-level risk factors that increase recidivism. Despite this, the variance component in Model 2 indicates that a significant amount of variation in recidivism still remains, indicating that other factors also contribute to recidivism levels.

**Level 2 (Neighborhood-Level):** The “neighborhood effects” literature described above emphasizes that residing in a community characterized by poverty, inequality, and socioeconomic disadvantage can increase the risk of a number of negative outcomes, including recidivism. Conversely, living in a neighborhood with ample resources, services, and amenities could mitigate negative outcomes. Models 3 and 4 of Table 2 present results that assess these possibilities while accounting for individual-level characteristics. In Model 3, we added neighborhood disadvantage to the predictive equation of recidivism. As shown, neighborhood disadvantage is significant and positive. Consistent with our predictions, living in a disadvantaged and resource poor neighborhood is a risk factor that increases the odds of recidivism above and beyond individual-level attributes. In particular, a one unit increase in the disadvantage index results in a 12 percent increase in the odds of recidivism (0.12 = 1 – exp (0.11)).
In Model 4, we included the ICE measure. Recall that ICE is an inequality measure that ranges from –1 to +1 and taps both ends of a neighborhood’s economic structure. The regression coefficient for the ICE measure is significantly and negatively related to recidivism, indicating that an individual living in a neighborhood that has more affluent relative to poor families is less likely to recidivate, controlling for individual-level factors. In fact, a one unit increase in the ICE index results in a 62 percent reduction in the odds of recidivism \( (0.62 = 1 - \exp(-0.97)) \). This finding suggests that neighborhoods with large concentrations of affluent families (relative to poor families), or resource rich neighborhoods, serve a critical protective function in reducing recidivism.

It is worth noting that neighborhood disadvantage accounted for roughly 13 percent of the variance in recidivism across neighborhoods while the ICE measure accounted for roughly 9 percent. Overall, the individual- and neighborhood-level variables accounted for more than half of the variance in recidivism \( (ND = 0.64 = 0.053 - 0.019 / 0.053 \text{ and } ICE = 0.60 = 0.053 - 0.021 / 0.053) \). Overall, the individual- and neighborhood-level variables accounted for more than half of the variance in recidivism (ND = 0.64 = 0.053 – 0.019 / 0.053 and ICE = 0.60 = 0.053 – 0.021 / 0.053).

While individual-level characteristics account for a large portion of the variance in recidivism, neighborhood disadvantage and the ICE measure also explain significant variation in recidivism. Table 3 displays the predicted probabilities of recidivism for individuals who reside in neighborhoods that differ on levels of disadvantage and inequality.

<table>
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<th>Contextual variables</th>
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<th>–1σ</th>
<th>( \bar{x} )</th>
<th>+1σ</th>
<th>+2σ</th>
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<tr>
<td>ICE</td>
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<td>0.49</td>
<td>0.43</td>
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<td>0.33</td>
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</tbody>
</table>

The predicted probabilities were computed using the coefficients from Models 3 and 4 of Table 2 and assume mean values for all other variables (Hosmer and Lemeshow, 2000). The predicted probabilities associated with the estimated neighborhood disadvantage effect suggest that recidivism risk ranges from about 42 percent in neighborhoods with low disadvantage \( (–2\sigma) \) to about 60 percent in neighborhoods with high disadvantage \( (+2\sigma) \), assuming mean values for all other variables. This translates into an increase of 43 percent in the risk going from a low disadvantage to a high disadvantage tract. The ICE measure shows a similar pattern where extreme inequality \( (–2\sigma) \) is associated with a 54 percent level of recidivism, while low levels \( (+2\sigma) \) of inequality are associated with lower recidivism rates (33 percent), translating into a 39 percent reduction in risk. Collectively, the results for neighborhood disadvantage and the ICE measure indicate that
community context is an important predictor of recidivism and that recidivism levels do vary depending on neighborhood characteristics.\textsuperscript{11}

**Implications of the Findings for Blacks and Predominantly Black Neighborhoods**

Unfortunately, given the racial composition of Multnomah County—it is predominantly White and there is little variation in race across neighborhoods—we were not able to test whether neighborhood socioeconomic context matters for racial minorities, and Blacks, in particular. Yet we believe that neighborhood context is likely to matter most for this racial group. We also believe that neighborhood context may explain, in part, why Blacks reoffend at a greater rate than Whites. Of critical importance is the fact that minorities more often live in distressed communities compared to Whites. Therefore, the “race effect” found in most studies may be an artifact of what is, really, a “place effect.” Because previous research has not considered that Blacks and Whites live in drastically different ecological contexts (a point addressed below), which may mitigate or aggravate recidivism, we do not know the extent to which “place” effects account for minorities’ increased recidivism levels.

Once again we can invoke social disorganization theory, which recognizes that racial inequality in America’s cities has created significantly different neighborhood contexts for Blacks and Whites. A variety of structural factors have generated and maintained a system of stratification giving rise to minority neighborhoods characterized by multiple disadvantages including poverty, joblessness, and family disruption. The social, political, and economic forces that help to create structural factors include, among other things, redlining and patterns of residential segregation (Massey and Denton, 1993; Squires, 1994), globalization and de-industrialization (Wilson, 1987, 1996), and discrimination (Krysan and Lewis, 2004; O’Connor et al., 2001). Scholars argue that the concentrated disadvantage found in many urban African-American communities is rarely paralleled in predominantly White neighborhoods, and that in most cities, race is highly correlated with concentrated disadvantage (Moreno\textsuperscript{if}ff et al., 2001; Sampson and Wilson, 1995; Sampson et al., 1997). Sampson (1987: 354) has argued that racial differences in socioeconomic status are so great that the “worst” urban contexts in which Whites reside are considerably better than the average context of Black communities.

Consider, for example, the case of Washington, DC. Washington, DC exhibits the fourth-highest degree of segregation between Blacks and Whites among the nation’s 100 largest cities (Brookings Institution, 2003) According to 2000 Census statistics, White median household income
($67,266) is more than twice that of Black median household income ($30,478), and 25 percent of the Black population lives below the poverty line compared to only 8 percent of the White population. While more than 80 percent of White adults in Washington, DC have a bachelor’s degree, only 17 percent of Blacks do. There is a 31 percent difference between the races in the number of female households with no husband present and with children under 18 (37 vs. 6 percent). Finally, 42 percent of Black households in Washington, DC lack access to an automobile at home compared to just 26 percent of White households. Statistics such as these indicate that Black neighborhoods in the city suffer from greater levels of economic disadvantage and social disorganization. This social reality leads to the hypothesis that neighborhood context will condition the relationship between race and reoffending levels such that minorities will not have higher rates of recidivism once neighborhood context is fully taken into account. In short, when considering the impact of criminals on neighborhoods and the impact of neighborhoods on criminals, social disorganization theory offers a rationale for understanding why current recidivism levels may be so high among ex-offenders and, more specifically, why rates may be particularly high among minorities. Unfortunately, we cannot test this proposition in the current study but we encourage other researchers to do so in future work.

Policy Implications and the Future of Prisoner Reentry

Today more and more Americans are sent off to prison to serve longer sentences. Few of them, however, receive the sort of rehabilitation they need to make it on the outside. As a consequence, recidivism levels remain high and many are concerned with what they consider to be the revolving door of the criminal justice system. Others are more optimistic; former US Attorney General John Ashcroft is hopeful for change. “America is the land of second chances,” Ashcroft said in 2004, quoting President Bush’s State of the Union Speech. “When the gates of prison open, the path ahead should lead to a better life” (Ashcroft, quoted in Mills, 2004). How true is this? Many believe that the myriad challenges ex-offenders face upon release make it too easy to return to a life of crime.

Opinions about the appropriate policy responses to prisoner reentry vary widely although almost completely overlooked are initiatives that focus on changing communities. In line with the results of our study, reinvestment and redevelopment of currently disadvantaged communities to which ex-offenders disproportionately return, we argue, would constitute a fruitful approach, one that could ultimately help to sever the linkages among race, residence, and recidivism. Improving local schools, increasing access to
capital, expanding job training services, growing local businesses and related initiatives can be effective crime reduction as well as economic development strategies (Squires and Kubrin, 2006). Given the challenges of prisoner reentry, particularly in a “get tough on crime” era, ex-prisoners are more reliant than ever on community services. While educating inmates and giving them job training for their life post-prison undoubtedly is important, these skills matter less if the communities to which ex-offenders return offer few opportunities for success. It is not surprising that recidivism rates are as high as they are today. It is also not surprising that even after controlling for all other factors, minorities tend to recidivate at a higher rate than Whites. Given that minorities, and Blacks in particular, return to disproportionately disadvantaged communities, the effects of “place” no doubt are stronger for this population.

In an era where states are beginning to reduce their prison populations and focus more squarely on reentry into the community, policymakers must begin to consider how and to what extent individual behavior is shaped by the surrounding environments. At present, neighborhood factors are absent from recidivism studies but findings from the social disorganization literature can inform policy on prisoner reentry specifically as it relates to identifying the barriers to successful reintegration. According to Jeremy Travis, former Director of the National Institute of Justice and reentry expert, “Developing a thorough understanding of the characteristics of returning prisoners and the challenges they face in their communities is an important step in shaping public policy toward improving the safety and welfare of all citizens” (Urban Institute, 2003).

Acknowledgements


Notes

1. A possible concern has to do with whether ex-offenders change residences after release. Unfortunately, the data provide only first-known address information. As such, we are not able to ascertain how frequently ex-offenders in the sample have relocated within the year or to model movements in housing location among these individuals. However, although ex-offenders do relocate, they are not likely to move frequently. In their study of prisoner reentry and residential mobility in Chicago, LaVigne and Parthasarathy (2005: 2) note, “Our findings
reveal that respondents’ residences were surprisingly stable over time, with that stability decreasing only marginally over the study period. At the time of the first postrelease interview (at two to three months after release), the average number of moves reported across respondents was 1.12, with 88 percent residing in only one place.” In addition, it is probably the case that when ex-offenders do move, they are more likely to move within Census tracts than across them. For these reasons, we believe that not having multiple address information post-release is not problematic for the study.

2. A long-debated issue is whether Census tracts constitute neighborhoods. Tracts generally have stable boundaries and are designed to be relatively homogenous with respect to population characteristics, economic status, and living conditions. Although imperfect, tracts as proxies have been used in most neighborhood effects studies (Sampson et al., 2002: 445).

3. The final number for the analyses is 4630 because 137 ex-offenders had no reported address information, 130 had reported address information outside of Multnomah County, and the remaining 105 cases had missing information on one of the variables: supervision level (n = 75), type of offending (n = 19), sex (n = 7), legal status (n = 3) and race/ethnicity (n = 1).

4. An important omission from this list of variables is a measure that reflects ex-offenders’ social class, such as socioeconomic status (SES), employment history or education level. Unfortunately, we were unable to obtain this information from the case files. A number of studies, however, find no significant effect for any of these measures on recidivism (e.g. Benedict and Huff-Corzine, 1997; Spohn and Holleran, 2002; Ulmer, 2001). Indeed in their meta-analysis, Gendreau et al. (1996) report that across the 131 studies sampled, a relationship between SES and recidivism was reported on only 23 occasions, and the associated mean Pearson r for SES with recidivism was only 0.06 (SD = 0.11). We therefore believe this omission does not affect the results of the study.

5. The models do not include measures of systems operations in the neighborhoods (e.g. arrest rates, calls for service rates, number of police officers, etc.). These data are not available at the Census tract level. Although we cannot directly measure these characteristics, we believe that we indirectly capture their effects through several variables that reflect contact with law enforcement officials including (1) whether ex-offenders are on probation, parole, or some other form of supervision, (2) the actual supervision level of ex-offenders, and (3) whether an ex-offender received a new sanction within the 12-month study period. All three measures reflect ex-offenders’ varying degrees of contact with law enforcement officials and so indirectly assess neighborhood systems operations.

6. The mean ex-offender age in our sample is a bit high compared to other offender samples. In most studies, the mean offender age is 30 or 31 (MacKenzie and Li, 2002: 52; Spohn and Holleran, 2002: 342; Ulmer, 2001: 174). This difference, however, is unlikely to affect the overall findings of the study.

7. It is important to note that the intraclass correlation is less informative in the
case of the nonlinear link functions because the level-1 variance is heteroscedastic. Instead, Raudenbush and Bryk (2002) suggest that a useful way to assess the between-neighborhood variation is to estimate a confidence interval of the probabilities across neighborhoods (see 2002: 291–335, for a detailed discussion).

8. Because we have relatively low cell size counts for the Hispanic, Asian and Native American ethnic categories, we re-estimated models excluding all racial/ethnic groups except for Blacks and Whites to determine if the results changed. The findings were consistent with the larger models that included all racial/ethnic groups. We therefore present the full models to move beyond the Black/White dichotomy.

9. To determine this, we took the difference between the one individual-level model and the two contextual models. For example, in Model 3 (neighborhood disadvantage), the total amount of variance explained by individual and neighborhood disadvantage variables was 64 percent. Recall that individual-level characteristics accounted for 51 percent of the variance in recidivism. The difference between Model 3 and Model 2 is 13 percent (13 = 64 – 51). Further, the difference between Model 4 (ICE) and Model 2 is roughly 9 percent (9 = 60 – 51).

10. To simultaneously assess the joint effects of neighborhood disadvantage and the ICE measure on recidivism, we estimated a single model that included both measures. However, multicollinearity between the two variables was a problem. As such, we estimated the neighborhood variables in separate models (see also Morenoff et al., 2001: 539). We also explored cross-level interactions and found none present. Thus, we focus on the main effects of individual and neighborhood factors on recidivism.

11. It is important to consider the issue of spatial dependence in the models given that our level-2 units are neighborhoods (Anselin, 1988). Spatial analyses are somewhat of a challenge in our study because it is multilevel and incorporating spatial effects may produce identification problems in that our neighborhoods of interest are affected by, as well as influence, other neighborhoods creating non-normal residuals. Furthermore, spatial autocorrelation techniques are not currently available in hierarchical linear modelling (HLM) (Morenoff, 2003; Morenoff et al., 2001). However, we believe it necessary to assess whether our findings are influenced by spatial dependency. To determine this we took the proportion of recidivism across neighborhoods and used it to create a spatial lag. We then replicated the main results introducing a spatial lag term in our HLM regressions. The results are presented in Table A1. Overall, the substantive results did not change, although our models did show some sign of spatial dependency where high recidivism levels of neighborhoods appear to influence recidivism levels in adjacent neighborhoods. These results suggest, therefore, that in addition to neighborhood effects on recidivism, there may also be spatial diffusion or spillover effects of recidivism from one neighborhood to another. We note, however, that our incorporation of the spatial lag term is a crude test at best of the spatial dependency process. To verify our results, we followed the
procedure used by Morenoff (2003) to build a hierarchical spatial model. We constructed a neighborhood-level recidivism measure adjusted for the HLM individual-level covariates and then regressed the recidivism measure on the neighborhood-level covariates and the spatial lag term. This procedure produced nearly identical results.

References


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