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Concentrated Disadvantage and Coercive Mobility: A Longitudinal Analysis of the Impact of Coercive Mobility

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Abstract

This study examines the impact of incarceration, or coercive mobility, on concentrated disadvantage, testing an essential component of the theoretical model proposed by Todd Clear and Dina Rose (1998) and elaborated by Clear (2007). These authors argue that while concentrated economic disadvantage may lead to high crime rates, chronically high rates of incarceration may operate as a type of "coercive mobility," exacerbating concentrated disadvantage and increasing crime rates, especially in high-minority urban communities. The study also examines the importance of religious congregations, as a measure of community social capital, which may moderate the relationship between coercive mobility and concentrated disadvantage. Theoretically, the effect of coercive mobility should be greater in urban areas, and smaller in areas where the number of religious congregations is high. I test these relationships using county-level data in 2000 and 2010 on prison admissions and releases from the National Corrections Reporting Program, social and economic indicators from the Census, and the number of religious congregations from the Religious Congregations and Membership Study.

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Dedication

This thesis is dedicated to all of the people, both family and friends, that have supported me throughout my college career. I am so fortunate to have such a supportive network, and I am grateful for the strong foundation that you all provided.

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I. INTRODUCTION

A. Mass Incarceration in the U.S.

Over the past four decades, the U.S. has experienced unprecedented growth in the prison population and the population under correctional control (Blumstein and Beck 1999; Western 2006; Garland 2001). A Pew Center on the States report finds that 1 in 100 Americans are incarcerated at any given time, and 1 in 45 Americans are on probation or parole (2009). Combined, these numbers indicate that 1 in 31 persons in the population are under some form of correctional supervision (Pew Center on the States 2009). This means that more than 2 million individuals are either in prison or jail, and over 5 million people are under community supervision via probation or parole (Pew Center on the States 2009).

Moreover, incarceration rates are disproportionate. Research finds significant racial and ethnic disparities in the use of imprisonment, as well as general involvement in the criminal justice system (Western 2006; Blumstein and Beck 1999; Bridges and Crutchfield 1988; Kent and Jacobs 2005; Kramer and Steffensmeir 1993; Spohn and Holleran 2000). Specifically, African American men are imprisoned at rates 7 times higher than any other racial/ethnic group (Western 2006). African American adults are four times more likely than whites and 2.5 times more likely than Hispanics to be under correctional supervision (Pew Center on the States 2009). Nearly one-third of African American men will be incarcerated at some point in their life (Smith & Hattery, 2008; Western, 2006).

There is also consistent evidence of disproportionality with regard to level of education, socioeconomic status, gender, age, and employment status. Some suggest that multiple sources of disproportionately can act to generate substantial cumulative disparity (Western 2006; Clear 2007). For example, educational disparity among the prison population is particularly profound.

Western found that the average state inmate has less than eleven years of schooling, and earned lower wages than non-incarcerated men with the same education (2006). Considering the combined effects of race and low educational attainment, it is not surprising that 60 percent of black, male high school dropouts born during or after the 1960s were incarcerated by the early 2000s (Western 2006). By the late 1990s, 30 percent of young black men without a college education were incarcerated. Furthermore, the majority of individuals incarcerated over the past forty years are minority men of an extremely disadvantaged class background (Clear 2007; Fagan et al. 2003; Lynch and Sabol 2004b; Western 2006; Beckett and Western 2001; Clear et al. 2001; Freeman 2000; Roberts 2004). Several studies have discussed how the combination of disparities across demographic characteristics place some groups at acute societal disadvantage, such that "the effects of harsh penal policies in the past 40 years have fallen most heavily on blacks and Hispanics, especially the poorest" (National Research Council 2014).

What are the consequences of such high rates of incarceration for demographically concentrated communities? Criminologists consistently find that areas with high rates of residential instability, weak family and community ties, and high rates of unemployment correspond to high rates of violence and crime in general (Clear et al. 2001; Sampson, Raudenbush, and Earls 1997). Violence and crime are no doubt important influences on incarceration rates. However, some recent research has also recognized that while community-level disadvantage (as a predictor of crime) may lead to high rates of incarceration, chronic high rates of incarceration may perpetuate and/or exacerbate macro-level disadvantage. Empirical investigations can help identify the mechanisms through which high rates of incarceration deplete communities' ability to combat crime and poverty, and ultimately steer already struggling neighborhoods toward disadvantage entrenchment.

B. The Current Study

The goal of the current study is to examine the macro-level impact of incarceration. I review the literature regarding mass incarceration and the negative consequences of incarceration for individuals, families, and networks. I then review research outlining how the spatial concentration of incarceration can be particularly deleterious for communities. I discuss criminological explanations as to the relationship between community characteristics and crime. I draw on these ideas and recent research regarding the negative consequences of incarceration, outlining how high levels of incarceration not only increase crime, but contribute to a cycle of increasing disadvantage and derive several relevant hypotheses. Using data from the years 2000 and 2010 and taken from the National Corrections Reporting Program for years, the Census, the Uniform Crime Report, and the Religious Congregations and Membership Study, I test my predictions and present related findings. I conclude with a summary of my findings and a discussion of these findings with regard to both the research literature and social context more broadly.

II. Theoretical Framework

Research finds that the majority of the most disadvantaged segments of the population reside in similar spaces, thus forming communities characterized by high levels of poverty, high levels of female headed households, low rates of educational attainment, and high rates of joblessness. The communities characterized by these "concentration effects" are prone to occur in urban inner cities (Clear 2007; Drakulich, Crutchfield, Ross, and Rose 2012). Clear and colleagues argue that these communities also correspond to high rates of crime, and given the recent trend in punishment, the highest rates of incarceration (2007; Sampson and Loeffler 2010). In other words, not only does mass incarceration disproportionality impact a specific

group, but mass imprisonment is also spatially concentrated in urban locations (Clear 2007; Fagan, West, Holland 2003; Sampson and Loeffler 2010; Western 2006). Several neighborhood-level and macro-level analyses find evidence of this relationship (Fagan et al. 2003; Clear 2007; Lynch and Sabol 2004b; Sampson and Loeffler 2010).

Rose and Clear (1998) proposed that high rates of incarceration concentrated in specific spatial units could be another destabilizing factor associated with disorganization, and resulting in even higher rates of crime. Moreover, they suggest that the forced removal of relatively large segments of community populations through incarceration has the same destabilizing effect as high rates of residential mobility. This hypothesis, later coined as the *coercive mobility thesis*, states that destabilization of communities occurs in two ways: removal and reentry (1998). Much like Bursik and Grasmick's argument, discussed below, that high rates of residential instability are particularly detrimental to the formation of social control, Rose and Clear argue that incarceration is coerced mobility that undermines the crime reducing functions of informal social control (1998; Clear, Rose, Waring, and Scully 2003; Clear 2007). Removal of relatively large proportions of the population damages social networks within the community, which potentially limits networks outside of the community. Broken networks lead to less attachment between community members and attachment to the community itself.

In order to fully understand the theoretical framework proposed by Rose and Clear (1998), it is necessary to review the fundamental components of social disorganization theory proposed by Shaw and McKay (1942/2009). Studies of the effect of environment on criminality often rely on Shaw and McKay's social disorganization theory (1942/2009). Using the breakdown of the city found in the Park and Burgess' concentric zone model, Shaw and McKay found that inner city areas were characterized by high poverty levels, high rates of residential

mobility, and high levels of racial/ethnic heterogeneity (thus different cultural backgrounds). These areas were also associated with higher rates of crime (Shaw and McKay 1942/2009). In studying the differences in communities, Shaw and McKay came to the conclusion that delinquency was not a product of the inhabitants, rather crime is a product of poor community organization and weak social controls.

There are several elements that contribute to the lack of community organization (Shaw and McKay 1942/2009). In addition to the characteristics stated above, community disorganization in lower income areas is also a product of competing value systems (Shaw and McKay 1942/2009). Conventional value systems are mostly uniform in areas of high economic status. However, in areas of low economic status, traditional morals and values are dominant, but such values are in competition with a delinquent value system. Shaw and McKay also discuss the lack of "philanthropic agencies and institutions" that are designed to help with local issues (1942/2009:90). Because these areas are plagued by high rates of poverty, institutions that are funded by local taxes also suffer. Thus, the informal controls provided by schools, as well as the sense of community cohesion provided by well cared for parks and city property is severely hindered. Furthermore, community disorganization prevents effective community social control, thus contributing to higher rates of crime (Shaw and McKay 1942/2009). The effects of weak social control combined with disorganization results in a community's inability to reach "approximate unanimity" on the recognition of common problems, as well as the solution to those problems (Shaw & McKay 1942/2009:90).

Bursik and Grasmick expand on these ideas by conceptualizing a systemic theory of crime and an explanation of community social control (1993). They divide community social control into three components: private, parochial, and public. Private controls are informal

controls between intimate groups, such as family and close friends. These controls are exercised through social support, and condemnation or threat of exclusion from the group. Parochial controls are informal community controls that occur between residents and local institutions such as schools, churches, stores, and voluntary organizations. Parochial controls also refer to relationships between neighbors who lack the intimate attachment found in the private order of control. The final form of control, public control, refers to (1) a community's ability to access outside agencies, such as "municipal service bureaucracies," to secure resources and (2) the relationship between the community and the local police department (Bursik and Grasmick 1993:17). Bursik and Grasmick state that each form of control develops over time through community level social interaction (1993).

However, interaction among neighborhood residents is less likely in communities characterized by high levels of residential instability. The frequent influx and outflow of local residents impede the formation of long term social networks. This, in turn, limits the community's capacity to exert and maintain social control that ultimately reduces the risk of crime.

Sampson and Wilson discussed the ways in which cumulative disadvantage is spatially concentrated in minority communities (1995). They emphasize social structural characteristics that create residential inequality in specific areas. One explanation for concentrated disadvantage is the social transformation of the inner city. Moreover, this transformation was a result of macro structural changes, such as the deindustrialization of inner cities, white-flight, and the exodus of middle class black families. All of these factors drastically impacted the economy of these areas, thus social institutions that require the financial stability of a regular economic system (schools, parks, churches, stores, restaurants, etc.) were substantially weakened from this process. The

transformation of the inner city resulted in concentrated disadvantage, or neighborhoods characterized by high rates of poverty, single parent households, joblessness, and low levels of education. In brief, "macrosocial forces (e.g. segregation, migration, housing discrimination, structural transformation of the economy) interact with local community-level factors (e.g. residential turnover, concentrated poverty, family disruption) to impede social organization" (Sampson and Wilson 1995:49).

The deterioration of inner cities combined with the disproportionate impact that this had on black communities furthered their social isolation. Furthermore, Sampson and Wilson state that the relationship between race and crime is evident when looking at the concentration of African Americans in areas characterized by structural social disorganization and cultural social isolation. Structural social disorganization refers to the lack of informal and formal social networks in a community. Cultural social isolation refers to the notion that these communities are cut off, or isolated, from mainstream culture.

Social networks are a way for communities to exercise social controls and build human and social capital. Similar to Bursik and Grasmick's discussion of the production of private control, informal networks include ties to family and friends, trust, and mutual feelings of unanimity. Formal networks refer to social institutions and participation in those institutions, which fits the requirements for parochial control (Bursik and Grasmick 1993). Combined, these networks result in community cohesion and "collective supervision that the community directs towards local problems," or collective efficacy (Sampson and Wilson 1995:45; Sampson et al. 1997).

Relatedly, Sampson, Raudenbush, and Earls outline the mechanisms by which elements of community level disorganization (high levels of poverty, residential instability, and

racial/ethnic heterogeneity) drives individual level behavior (1997). Sampson et al. present the concept of "collective efficacy," or the "differential ability of neighborhoods to realize the common values of residents and maintain effective social controls" (1997: 918). According to Sampson et al., the rate of violence in areas characterized by high levels of concentrated disadvantage (poverty, residential instability, female headship, and joblessness) is largely mediated by collective efficacy (1997). In other words, disorganization contributes to the absence of informal and formal social controls, thus resulting in neighborhood residents' inability to produce collective efficacy. However, the formation of this community-level unanimity strongly mediates the impact of concentrated disadvantage/disorganization on violent crime rates.

In sum, these theories and theoretical contributions offer insight into the ecological factors of crime production. Socially disorganized communities lack the ability to exert informal social controls and collective efficacy to effectively resist crime. Therefore, crime is concentrated in areas characterized by acute disadvantage. These disorganized neighborhoods are disproportionately poor and nonwhite. The extreme disadvantage these communities suffer makes them susceptible to high rates of crime.

III. The Effect of Incarceration on Crime

Clear and other scholars draw on explanations of the spatial concentration of crime to focus on the criminogenic effects of the spatial concentration of incarceration (2007; Fagan et al. 2003; Lynch and Sabol 2004b; Frost and Gross 2012). In this regard, social disorganization theory, and related concepts, provide insight into how high rates of incarceration can contribute to community-level disadvantage and higher rates of crime. Recent studies have suggested that the damage done to communities, specifically, urban minority communities, by concentrated

incarceration are vast and penetrate many aspects of community organization. Indeed, rather than alleviating crime, scholars contend that perpetually high rates of incarceration make disadvantaged communities worse.

The stigmatization and resultant hardships associated with incarceration and the additional isolation of that family and/or close friends of offenders/ex-offenders diminishes community integration and social cohesion (Clear et al. 2001; Roberts 2004; Clear 2007; Rose, Clear, and Ryder 2001; Rose and Clear 2002; Drakulich et al. 2012). With weakened inter-community networking, the entire community can become characterized as a "problem" place; residents in these neighborhoods struggle to build trust with other residents and maintain a pro-social identity (Clear 2007; Clear et al. 2001).

Intra-community networks, or larger networks that the community has with outsiders, are also severely damaged by concentrated incarceration (Clear 2007; Rose et al. 2001, Clear et al. 2001). The stigma of being a "problem" place prevents businesses needed for jobs from opening in these areas. The prevention of new business and new residents further isolates and disadvantages an already poorly resourced area. Clearly, this limits opportunities for both law-abiding and ex-offenders to find employment.

Members of the incarcerated population may have previously occupied important familial roles as primary earners, financial contributors, and/or caretakers. Many may have had important community networks that he or she and his/her family relied on to be active neighborhood participants. Given that the majority of offenders were legally employed prior to arrest, it is likely that they not only contributed financially to their family, but also to their community (Glaze and Maruschak 2008). These individuals most likely buy goods that generate sales tax revenue and support local business. In brief, offenders are likely to "represent both assets and

liabilities to their communities," and portraying them as one or the other misses the larger picture of the real impact that the justice system has on poor communities (Rose and Clear 1998:452).

Incarceration also impacts individual and community assessments of formal social controls (Rose and Clear 2004). Moreover, the perceived relationship between the criminal justice system and community residents of high incarceration places is a partial product of the amount of criminal justice intervention in these places. The system loses legitimacy in high incarceration areas because these residents feel that they are targeted unfairly (Clear 2008). However, Clear et al. finds evidence that community residents appreciate the removal of certain offenders, and respect the reinforcement of legal norms though criminal justice intervention (2001; Clear 2007). Although the legitimacy of the system is threatened through the overuse of incarceration, the intended effects of the criminal justice system are not lost on this group.

Annually, over 600,000 inmates are released back into their prior communities, while presumably similar proportions of residents are admitted to prison from these communities as well (Freeman 2003; Mears, Wang, Hay, and Bales 2008; Kubrin and Stewart 2006; Hipp and Yates 2009; Hannon and DeFina 2010). The excessive use of incarceration has forced communities into a continuous pattern of coercive mobility due to prison cycling, "or the ongoing process of admission to and release from imprisonment of offending populations" (Frost and Gross 2012:465).

Relatedly, this process results in the transmission of prison culture to public life (Roberts 2004; Hagan and Dinovitzer 1999). Continual prison cycling has important potential consequences for adolescents growing up in areas where norms alternate between "the code of the street" and traditional "decent" norms (Anderson 1994). Rose and Clear note that these communities contend with heterogeneity of norms and values (1998).

Empirical studies find evidence of the above relationships. Because incarceration disproportionately impacts extremely disadvantaged areas, the pattern of incarceration has become an ecological feature of the community in some places (Clear 2007; Sampson and Loeffler 2010; Fagan et al. 2003; Roberts 2004). In studying the reciprocal effects of incarceration in New York neighborhoods, Fagan et al. found that not only was incarceration clustered in the poorest neighborhoods, but also that jail admission for drug arrests increased over time despite declining crime rates (2003). This finding suggests that jail admissions have become a social ecological factor in poor communities. Relatedly, Roberts suggests that the concentration of incarceration in disadvantaged areas has distorted social norms resulting in lack of consensus on common values (Roberts 2004).

Greenberg and West find evidence of similar issues at the macro level (2001). In a national analysis looking at variations in imprisonment rates, Greenberg and West found that the relationship between crime and imprisonment rates was not consistently linear, or in the expected direction (2001). Furthermore, decreases in the property crime rate from 1981 to 1991 predicted increases in imprisonment rates by state, but this relationship did not reach statistical significance. There was a slight positive relationship between change in the violent crime rate in 1981 to 1991 and imprisonment rates, but again, this relationship was not statistically significant.

Greenberg and West also found that some of the strongest predictors of variation in state imprisonment rates were economic. More specifically, unemployment in 1981 predicted an increase in imprisonment rates in 1991. Change in the amount of welfare spending from 1981 to 1991 was negatively related to imprisonment rates, meaning that as welfare spending decreased in this time period while imprisonment rates increased. A positive relationship was observed for state revenue and imprisonment rates, suggesting that increases in state revenues from 1981 to

1991 also predicted increases in imprisonment rates in 1991. These relationships provide evidence that not only do cultural norms that impact imprisonment rates change at the neighborhood level as proposed by Clear (2007), but significant change also occurs at the macro level.

The ongoing removal and reentry process destabilizes communities by interrupting social networks and breaking down mechanisms of informal social control, thus leading to more crime. Clear et al. found that prison admission in one year did not have a strong effect on crime rates the following year, but "after a certain concentration of residents are removed from the community through incarceration, the effect of additional admissions is to increase, not decrease, crime," suggesting a nonlinear relationship (2001:55). Hipp and Yates found that although rates of returning parolees have a significant and positive relationship with aggravated assault and burglary rates, social capital, measured as the number of voluntary organizations in the neighborhood, moderated this effect (2009).

Relatedly, Hannon and Defina found that not only is reentry significant and positively related to violent crime, but the interaction of unemployment and reentry is significant predictor of violent crime (2010). In other words, the effect of large numbers of entering ex-offenders on crime is strongest when the unemployment rate increases. The reentry of ex-offenders was not the major contributor of later crime; rather concentrated reentry into economically deprived places was found to be the strongest predictor of later crime.

Mears et al. reported that resource deprivation is a significant predictor of recidivism for young nonwhites, and Kubrin and Stewart found that neighborhood disadvantage (poverty, unemployment, median family income, proportion of residents on public assistance) is also significant and positively related to recidivism (2008; 2006).

In sum, these studies indicate that ecological characteristics such as economic deprivation and associated neighborhood disorganization are strong predictors of present and future crime and incarceration rates. In the following paragraphs, I summarize literature on the impact of incarceration for individuals and families. While much of this work relies on individual and meso-level outcomes, they nonetheless suggest the mechanisms through which having substantial proportions of incarcerated persons in a given jurisdiction can have substantial immediate and long-term impacts on community well-being. That is, they discuss the ways in which prolonged periods of high (and accelerating) rates of incarceration may perpetuate and exacerbate macro-level disadvantage.

IV. The Effect of Incarceration on Disadvantage: Individuals

Research finds that average inmate possesses fewer forms of human capital than non-offenders (Freeman 2000; Western 2006). Human capital refers to an individual's knowledge, skills, and ability to "compete in the marketplace" (Clear 2007:80). Moreover, inmates are more likely to have lower test scores in school and have fewer years of education, thus the majority of the incarcerated population is already disadvantaged due to low skill and low levels of education. Thus, African American men face significant human capital deficits. They are the population most likely to be incarcerated (young, low skill, minority men), and find employment in the secondary labor market, which provides fewer opportunities for secure long-term employment (Western 2006; Freeman 2000; Freeman 2003). In other words, the employment options for this group are limited to mostly low skill jobs and minimal wages prior to incarceration.

The challenges of incarceration exceed the amount of time an inmate spends behind bars, and seeps into nearly every aspect of daily life post incarceration. The stigma associated with a criminal conviction is especially harmful for individuals both while incarcerated and, more

importantly, after release from prison. In prison, the individual is stripped of his or her identity, which is then replaced by a number. Upon release, the individual may struggle to reclaim his or her identity. Issues with personal identity, or lack thereof, are associated with low feelings of self-worth (Clear 2007; Clear et al. 2001). Moreover, feelings of self-worth and personal identity are paramount in order to thrive socially, especially in finding a job and reintegrating back into society.

The stigma of a criminal record is arguably the greatest challenge that ex-inmates face when searching for employment (Western 2000; 2002; 2006; Freeman 2000; 2003; Huebner 2005; Western and Pettit 2000). Simply put, employers are less likely to hire ex-offenders (Freeman 2003). Employers view a criminal conviction as a sign of untrustworthiness; studies find that ex-offenders are less likely to be hired than those without a criminal record despite controlling for similar demographic characteristics (Western 2006; Freeman 2003). The stigma of a criminal record especially limits access to career jobs (Western 2002). Career jobs boost human and social capital, or "the capacity of a person to call upon personal ties (usually within social networks) in order to advance some personal interest," through the development of weak ties (Clear 2007:80). This limitation has serious consequences based on the well-established link between gainful employment and desistance from crime (Sampson and Laub 1990).

While incarcerated, the few networks that are available to inmates are primarily criminal networks, thus the opportunity to build legitimate social capital through networking is limited if not non-existent. Furthermore, incarceration severs ties to previous job networks due to the stigma of conviction, as well as the total removal from the job market. There is little opportunity to maintain ties to previous employers, and virtually no chance to create employment ties while imprisoned or when subsequently released.

Incarceration also directly impacts the attainment of job skills and experience. Due to time lost to incarceration, ex-offenders have less of the job skills acquired through work experience (Freeman 2003; Western 2002). In other words, the ability for the individual to build necessary human capital in order to succeed in the market place is severely undermined by incarceration. In addition, Freeman finds that a disproportionate number of ex-inmates report mental and/or physical disabilities that further hinder their ability to find work after being released (2003). Some of these conditions include learning disabilities, and drug and alcohol addiction. It is also possible that time spent in prison may worsen preexisting mental and/or physical issues thus exacerbating cumulative disadvantage (Western 2002).

Thus, it is not surprising that incarceration also limits wage earnings over the life-course for ex-offenders (Western 2006; Western 2002). Western found that, after controlling for individual level characteristics and differences in work experience, ex-inmates earn approximately 16 percent less than men who have not been incarcerated (2002). Moreover, incarceration reduces wage growth, meaning that "the wage gap between nonconvicts and ex-convicts grows as workers age" (Western 2002: 538). Overall, incarceration accounts for a 30 to 40 percent reduction in potential earnings over the life course for ex-offenders (Western 2006).

V. The Effect of Incarceration on Disadvantage: Family and Children

Incarceration has been shown to impede aspects of family formation (Western and Wildeman 2009; Lynch and Sabol 2004a; Western 2006). Because ex-offenders are less likely to obtain stable long-term employment, they are also less likely to be considered suitable marriageable partners (Western 2006; Western and Wildeman 2009; Huebner 2005). Huebner found that prior incarceration reduced the odds of marriage by 8 percent (2005: 294). Furthermore, incarcerated men in their twenties are half as likely to be married as non-offenders

(Western and Wildeman 2009; Western 2006). Rates of marriage for African Americans are especially low in comparison to other racial/ethnic groups, as the gender ratio of marriageable men to marriageable women is increasingly skewed by the increased use of incarceration (Western 2006).

Maintaining ties to family and strong social networks while in prison can help secure one's sense of identity, but telephone privileges are quite costly, and it is not uncommon for a prisoner to be held hours away from his or her kinship networks. For example, Mumola found that the majority of state prisoners are housed in facilities that are over 100 miles away from their children (2000). Prisoners also report feelings of insecurity and mistrust regarding their relationships with loved ones on the outside (Western 2006). They worry that their spouse will find another partner to fill the void of their absence. Again, the barriers of communication between prisoners and their loved ones can harm familial bonds and important social and informal networks.

Parental incarceration can have serious negative implications for the development of the child's human and social capital. Despite low marriage rates among inmates, inmates are just as likely as non-offenders to have children. A report released by the Bureau of Justice Statistics in 2008 found that over 50 percent of state inmates and over 60 percent of federal inmates had minor children (Glaze and Maruschak 2008). Furthermore, nearly 44 percent of male prisoners with children and over 60 percent of female prisoners with children report living with their children prior to being incarcerated. This report revealed that nearly 2 million children in the U.S. have at least one incarcerated parent (Glaze and Maruschak 2008). The growing number of children impacted by parental incarceration is one the major collateral consequences of mass incarceration.

VI. The Effect of Incarceration on Disadvantage: Implications for Communities

Research suggests that approximately 95 percent of the incarcerated population is expected to return to society, and majority of these offenders will return to the community where they lived prior to arrest (Freeman 2003; Petersilia 2003). Incarceration reduces the likelihood of meaningful employment for ex-offenders, which at the community level, is related to fewer marriages and increases in female headed households (Lynch and Sabol 2004b, Western 2006). Clear identified four common themes that characterize the main negative consequences of incarceration on communities: stigma, financial, identity, and relationships (2007; 2008; Clear et al. 2001).

The concentration of incarceration in disadvantaged areas means that multiple individuals and families struggle with this stigma in the community. Lynch and Sabol found that the number of at-risk individuals in prison ranged from 0 to 276 out of 1000 residents per neighborhood in Baltimore, MA, meaning that anywhere from 0 to 27.6 percent of the at-risk population was incarcerated in a given neighborhood (the average was 3.5 percent) (2004b). However, according to Clear et al.'s analysis of the impacts of high incarceration neighborhoods in Tallahassee, FL incarceration is not openly discussed, and families often isolate themselves from previous social networks to avoid the stigmatization (2001).

The stigma of incarceration also increases the likelihood of residents moving elsewhere, and as residents move out they tend to sell their property for any amount offered to them resulting in less value in the economy through the diminishing worth in the local housing market (Clear 2007). According to the respondents in Clear's analysis, this reflects the overall value of the community, which perpetuates the negative reputation of the community to outsiders and impedes the development of pro-social identities of residents (2007).

The accumulated effect that stigmatization has on communities is found in the limited number of social networks and decreased levels of informal control. Moreover, increases in the removal of community residents directly decreases the number of sustainable networks. The additional isolation of that person's family and/or close friends further diminishes community integration, or social cohesion (Clear et al. 2001; Roberts 2004; Clear 2007; Rose, Clear, and Ryder 2001; Rose and Clear 2002). Thus, inter-community networking is harmed by the prison cycling process.

The return of large numbers of offenders to resource poor areas has severe negative financial consequences. As previously stated, the stigma of being a "problem" place prevents new business and new people from coming to these areas. In this way, incarceration reduces the likelihood of meaningful employment for ex-offenders, which at the community level, is related to the breakdown of the nuclear family (Lynch and Sabol 2004b, Western 2006).

A community's capacity to absorb economic downturn and residential instability depends on community resources, usually in the form of human and social capital (Clear 2007, Sampson et al. 1997). Disadvantaged communities already struggle to establish valuable human and social capital, and thus are unable to cope with the increased instability that results from high rates of coercive mobility. There are also fewer neighborhood resources to respond to the conditions of poverty, including food banks, soup kitchens, education and intervention programs, transportation, resident associations, and healthcare facilities. Therefore, high rates of incarceration further disadvantages poor communities by putting increased strain on social and economic networks that are needed to build human and social capital. Processes of collective efficacy are eroded, weakening a community's ability to recognize and ameliorate social problems in their neighborhood.

Communities stuck in the process of prison cycling adopt different social norms and cultural expectations to cope with the changes in street norms brought on by large populations of ex-prisoners (Clear 2007; Sampson and Loeffler 2010; Fagan et al. 2003). In other words, once a sizeable proportion of the population begins to operate under a different set of norms (e.g. the norms associated with prison culture), it is likely that the new value system will proliferate throughout the community, thus shifting residents away from traditional norms. For example, in a study of New York neighborhoods, rates of drug arrests in neighborhoods with high rates of incarceration remained staggering despite declining crime rates, suggesting that the drug trade became a source of income and a social ecological factor for these communities (Fagan et al. 2003). Rose and Clear refer this consequence of incarceration as *heterogeneity of norms and values* (1998). Theoretically, the idea of heterogeneity of norms and values is also consistent with criminological explanations as to why racial/ethnic heterogeneity contributes to community social disorganization (Shaw and McKay 1942/2009). The contention of norms in disorganized communities influences disadvantage independent of crime and incarceration by diminishing social cohesion.

VII. The Effect of Incarceration on Community Disadvantage: Empirical Research

The majority of research regarding the negative impacts of mass incarceration on communities predicts crime rates, or one aspect of social disorganization, such as female headed households using incarceration or social disadvantage measures as the primary explanatory variables (Clear et al. 2001; Lynch and Sabol 2004b; Kubrin and Stewart 2006). These studies also suggest that increases in poverty and non-nuclear families may be a product of chronic high-rates of incarceration.

Sampson and Loeffler examined this relationship by conducting a time series analysis using incarceration as the main predictor of social disadvantage (2010). Using neighborhoods in Chicago as the unit of analysis, Sampson and Loeffler (2010) tested the hypothesis that the incarceration rate in 1995 to 2000 was a strong predictor of concentrated disadvantage (%poverty, %unemployed, % receiving welfare, and % single-parent female headed families) in 2005 while controlling for changes in crime rates. They also found that "concentrated disadvantage strongly predicts later incarceration and that incarceration strongly predicts later disadvantage" (Sampson and Loeffler 2010:29). Thus, it can be inferred that the cycle of disadvantage and incarceration entrench communities in a "negative feed-back loop" that they are not equipped to escape (Sampson and Loeffler 2010:29).

Relatedly, Clear et al. (2003) tested the hypothesis that high levels of incarceration in 1996 predicted increases in crime in 1997 for neighborhoods in Tallahassee, Florida. They used two key independent variables as measures of coercive mobility: admission rates and release rates from prison in 1996. Not only did they find that coercive mobility was concentrated in poor neighborhoods located in the center of the city, but Clear and colleagues also found support for their hypothesis. Moreover, coercive mobility in 1996 strongly predicted crime in 1997 while controlling for concentrated disadvantage (%poverty, %unemployed, % black, and % single-parent female headed families) and prior crime. They conclude that the relationship between ecological characteristics of communities that influence disorganization and the effects of disorganization are nonlinear rather than linear as proposed by social disorganization theory.

VIII. Contributions of the Current Study

Many of the studies on the negative consequences of incarceration, including analyses at the neighborhood level, focusing on neighborhoods within one state. Specifically, Clear et al.'s

(2003) work utilizes data on neighborhoods in one city (Tallahassee, FL). Similarly, Sampson and Loeffler's work focused exclusively on Chicago neighborhoods. So it remains unclear whether the relationships these works identify can be generalized to the population more broadly. Data is limited in this regard, as it is difficult to achieve a unit of analysis small enough to capture community level effects, while also finding a large enough sample to be generalizable to the population at large.

Sampson and Loeffler (2010) examine incarceration rates, but do not include measures of coercive mobility more specifically; therefore the degree to which disadvantage is due to having a substantial number of people incarcerated over time versus the specific causal cycling that Clear and colleagues (2003; 2007) propose is unclear. On the other hand, Clear and colleagues measure coercive mobility, but do not take into account the race-specific measures that their theory seems to propose (2003). Specifically, they describe the decline of African American neighborhoods, which suggests that coercive mobility is particularly harmful for black communities, but do not group admission and release rates by race. Furthermore, neither group of authors take into account possible mediating mechanisms through which coercive mobility operates to foster disadvantage, such as through the breaking down of social networks provided by salient community organizations.

Some research has explored similar issues, but much of this research is at the national level (Greenberg and West 2001). For example, Greenberg and West discuss the importance of state level social characteristics such as racial make-up of the state, political arrangements (i.e. political conservatism), religious fundamentalism, welfare spending, poverty, and unemployment in predicting state variation in levels of imprisonment. Furthermore, this study employs longitudinal analyses to determine the influence of these predictors on state imprisonment rates.

The current study differs from Greenberg and West's research in that they examine the influence of macro-level social measures on incarceration whereas I examine the impact of incarceration on county-level social measures (2001). Unlike Greenberg and West, the current study captures the potential county-level variations in incarceration and rates of poverty, unemployment, and number of religious congregations, which is necessary in order to discuss the ways in which coercive mobility impact communities as opposed to states. Because Greenberg and West's (2001) macro-level analysis addressed state characteristics pertaining to imprisonment rates, this national aggregate falls short of actually getting at the community-level theories of neighborhood deterioration posed by Clear et al. (2003).

The current study builds on both Sampson and Loeffler's and Clear et al.'s work by analyzing the impacts of concentrated incarceration, disadvantage, and crime in 2000 on change in concentrated disadvantage in 2010 (2010; 2003). Previous research on this topic is limited to communities in one state, and does not include differences in coercive mobility and concentrated disadvantage by racial group. Moreover, previous research does not examine the potential mediating and moderating effects of important community sources of social capital such as religious congregations. The current study addresses these gaps in the literature by including multiple counties from several states, using race specific measures of coercive mobility and concentrated disadvantage, and including a measure of the number of religious congregations to determine the extent to which coercive mobility deteriorates community resources resulting in increased levels of disadvantage.

IX. DATA & METHODS

A. Sources of Data

The current study relies on four data sources. The dependent variable, *concentrated disadvantage*, included several key variables calculated using data from U.S. Census 2000 and 2010. I used the Bureau of Justice Statistics National Corrections Reporting Program (NCRP) data to construct the primary independent variable, *coercive mobility*. I also utilized the Religious Congregations and Membership Study (RCMS) data to create a measure of community social capital, *total congregations*. Lastly, I used Uniform Crime Report (UCR) race specific arrest statistics to calculate a *total violent crime arrest rate* for each racial group in the analysis.

The NCRP provides data for 2000 and 2010 on the prison populations of up to 38 states (National Archive of Criminal Justice Data, ICPSR 34984). The data provides demographic and legal characteristics of those admitted to prison, including the county of sentencing, as well as information regarding the type of release from prison, and release from parole. In order to capture the most accurate number of individuals admitted to state prison, I limited the total admissions to new court commitments, parole revocations, probation revocations, and 'other' (e.g. escape returns). I excluded cases transferred from other jurisdictions, cases sentenced to less than one year and individuals under age 18.

Total prison release includes all offenders released conditionally or unconditionally from a state correctional facility, excluding those who were transferred to different facilities and those who died while imprisoned. I also excluded a small number of cases admitted in state courts but held in federal custody because county FIPS codes were not available.

Although much of the theoretical literature reviewed above discuss the consequences of incarceration at the neighborhood level, research in this area as well as research on community characteristics and crime rates uses larger units of analysis, such as metropolitan areas or

counties (Sabol and Lynch 2003; Sampson 2013). Micro-level effects of the cycle of incarceration over time are likely to be evident at the county level as well. Using counties also has a number of advantages. Counties provide a large enough sample size to adequately assess the proposed hypotheses while providing results that may generalize to the population at large. The county-level is also the lowest level of aggregation for which necessary data are available nationwide.

In order to facilitate race-specific comparisons, I restricted the Census data for both points in time to include counties with a minimum population of 10,000 with at least 2,000 African American residents. After these changes were made, 1,078 counties met the criteria. The number of counties used in the analysis was then restricted by the availability of the NCRP data. Of the 1,078 counties available in the Census that met the population criteria, 899 counties, or 83 percent of the counties available in the Census are represented in the NCRP. The NCRP data was limited to counties that reported in 2000 and 2010. After matching the limited NCRP data to the Census data limited by population criteria, 779 or 42 percent of the sample counties in the NCRP are represented in the Census. The data was then matched with the other 2 data sources (UCR arrest and RCMS) resulting in a sample size of 702 counties. Finally, the sample of counties was screened for extreme cases by plotting the residuals, which led the removal of one case resulting in a final sample size of 701 counties. Representing 24 states, this final dataset provides a variety of regional and county contexts.

B. Dependent Variables

The dependent variable for the current study, *concentrated disadvantage*, is a combination of characteristics of ecological disadvantage that prior research has determined to

be highly correlated, and often times operate together to produce criminogenic places. Previous studies of the effects of incarceration on crime and disadvantage have measured concentrated disadvantage as a factor that combines poverty rate, unemployment rate, the percent of households that are female-headed, and the percent of the population receiving public assistance (Sampson and Loeffler 2010; Clear et al. 2001). The current study uses these same indicators.

The dependent variables used in the current study were calculated using social, demographic, and economic information from the U.S. Census for each county in 2000 and 2010. Poverty was measured as the percent of the population, and female headship was measured as the percent of households with related children under the care of a single-parent female. Unemployment was measured as the percent of the population unemployed but seeking work in the labor market, and public assistance was measured as the percent of the population that receives public assistance per county.

To be consistent with the limited amount of empirical work done on this concept, I created the same measure of concentrated disadvantage (%poverty, %unemployed, %female-headship, and %public assistance). The dependent measures were constructed to be race-specific to isolate the relationship proposed by Clear and colleagues (2003). This results in two dependent variables including a measure of *black concentrated disadvantage* and a measure of *nonblack concentrated disadvantage*.

Principle component factor analysis standardizes the combined measures to create a mean of 0 and a standard deviation of 1. This technique makes calculating change scores (CD in 2010 – CD in 2000) problematic due to the lack of variability produced by the factor. Therefore, the current study utilized a different operationalization of concentrated disadvantage to be used in

change analyses. A measure of *total concentrated disadvantage* was created by summing the four measures used in the factor (%poverty, %unemployed, %female-headship, and %public assistance) for each racial group. Calculating a total percentage sum of disadvantage for both points in time and using these measures to calculate a change score allows for significant variation in the dependent variable across counties. Total disadvantage in 2000 was then subtracted from total disadvantage in 2010 to create a measure of change in concentrated disadvantage. This operationalization of change in concentrated disadvantage results in two dependent variables: *black change in concentrated disadvantage* and *nonblack change in concentrated disadvantage*.

C. Key Independent Variables

The primary explanatory variable in the current study is *coercive mobility*. Two measures from the NCRP were used to operationalize this concept: the total number of individuals admitted and released from state prisons, by county of admission, in 2000 and 2010. The sum of these two measures equals *total prison movements*. I calculated race-specific (black, non-black) rates of prison movement by dividing the total number of the population and multiplying by 10,000. Thus, *coercive mobility*[1] is a measure of the rate of total prison movements per 10,000 in the population.

This operationalization is consistent with Clear et al. (2001) measure of coercive mobility, in that they also relied on admission rates and release rates. I ran analyses using both the admissions and release rates in the same model, as Clear et al. (2003) do in their analysis. However, supplemental analyses revealed high correlation between the two measures and,

[1] Supplemental analyses revealed issues of multicollinearity between measures of percent urban and interaction terms, thus measures of percent urban were centered on their means to correct for this.

subsequently, little difference between findings across operationalization strategy. A measure of the total prison movements rate provides more variation and a larger change in totals over time, thus this operationalization of coercive mobility is the most fitting for the current study.

Clear (2007) notes that the level of religiosity of communities may also dampen some of the damaging effects of incarceration. On the other hand, the deleterious effects of coercive mobility on community organization may suggest the breakdown of social networks necessary for creating social capital. Therefore, although religion is not the primary focus of this paper, this paper utilizes measures of community religious institutions to examine these possibilities.

To examine the social networking capacities of religious institutions, the current study relies on data from the Religious Congregations & Membership Study (RCMS). The information collected for 2000 and 2010 was sponsored by the Association of Statisticians of American Religious Bodies (Jones et al. 2002). The RCMS provides county-by-county listing of religious bodies in the United States for over 140 religious denominations. Participating religious bodies provide information on the numbers of churches, full members, and adherents (i.e. regular participants and church members who are not considered full members).

I include *the rate of the number of congregations* to examine potential mediating and moderating effects of sources of social networks (i.e. religious intuitions) on the impact of incarceration and concentrated disadvantage. The rate of congregations refers to the total number of churches, temples, mosques, or any other publicly specified group meeting place where people meet to practice their faith per 10,000 county residents.

Although previous research that assessed the relationship between crime and religion in communities often relies on a measure of religious adherence rates, the current study utilizes the rate of religious congregations for two reasons: 1) the focus of the current study is on

concentrated disadvantage, not crime. Disadvantage, as operationalized in the current study, is an assessment of institutional failure on the part of the community. Disadvantaged communities lack resources provided by social institutions to combat the deleterious effects of disadvantage. Thus, the present study is interested in the impact that religious institutions, or congregations, has on county-level disadvantage. 2) Adherence rate is a measure of individuals in the surrounding area that regularly attend religious services per 10,000 in the population at the county-level. The adherence rate largely misses the impact that the presence of the religious institution may have on the community as a whole. As Clear (2007) notes, communities affected by coercive mobility may be characterized by large homeless populations and high rates joblessness. Churches are known for servicing the community by providing shelter and other necessities to those in need, thus the number of congregations may better capture the service-oriented capabilities of religious institutions.

D. Control Variables

Prior research and criminological theory has identified key macrostructural characteristics as important covariates of crime rates (Shaw and McKay 1942/2009; Sabol and Lynch 2003; Clear et al. 2001. I control for *residential mobility* (i.e., the percent of individuals that moved houses within the past 5 years); *racial/ethnic heterogeneity* calculated as the percent of the population that is black; *male crime-prone population* (i.e. proportion of the population that is male and between the ages of 15 and 29); *educational attainment* (i.e. calculated as the percent of the population without a high school diploma or equivalent). These measures were constructed using Census data for 2000 and 2010.

Similar to prior research, I created a *black violence rate* and a *nonblack violence rate* using the Uniform Crime Report race-specific arrest data (Clear et al. 2001; Sampson and

Loeffler 2010). The violence rates were created by summing the total number of arrests for homicides, forcible rapes, robberies, and aggravated assaults. To insure stability in the data, I summed arrest counts per offense for 1999, 2000, and 2001 and 2009, 2010, and 2011. The arrest counts were aggregated to the county level for all six points in time. The three-year arrest figures were then averaged to create violence indices. The three-year averages were then divided by the race-specific population and multiplied by 10,000 to create a rate.

Clear's (2007) theoretical framework outlines the detrimental impact that coercive mobility has on communities over time. The communities he refers to are primarily disadvantaged, minority communities that exist in urban places. Thus, the current study also utilizes a measure of *percent urban*[2] to control for the degree of urbanity within counties. The inclusion of this measure will also help to determine whether the relationship between coercive mobility and concentrated disadvantage is only an urban phenomenon, or if it is something that occurs in the population more broadly. To further examine this point, the present study also tests an interaction effect of percent urban and coercive mobility, *percent urban x black/nonblack coercive mobility*.

E. Proposed Analytical Strategy

Because I am interested in predicting the degree of change over time in concentrated disadvantage (dependent variable) that is associated with the level of coercive mobility, I will be conducting longitudinal multivariate regression analyses. All multivariate models of change will include 2000 estimates of disadvantage as covariates. Otherwise, it is unclear whether the relationships between the independent variables are a result of the association to change over time, or if the relationship is a result of the association between the independent variables and the

[2] Supplemental analyses revealed issues of multicollinearity between measures of percent urban and interaction terms, thus measures of percent urban were centered on their means to correct for this.

earlier disadvantage. Controlling for concentrated disadvantage at 2000 accounts for this, capturing the net effects of the change in concentrated disadvantage and the independent variables.

There are a number of ways in which regression analyses can capture the correlates of change. After I regress each of my 2010 disadvantage outcomes on coercive mobility to establish the baseline association between these measures, I run a series of models applying two approaches: 1) regressing Concentrated Disadvantage (CD) at 2010 (Time 2) on predictors measured at 2010, while including 2000 CD (Time 1) as a covariate; and 2) using change scores as the dependent variable (Time 2 CD -Time 1 CD), regressed on predictors at Time 2 (or changes in predictors, to be determined based upon preliminary analyses), while including Time 1 CD as a covariate (Dalecki and Willits 1991). Both techniques provide virtually identical interpretations of the substantive relationships (Dalecki and Willits 1991; Allison 1990). While the former is the more common technique in studies of community-level change and is consistent with Sampson and Loeffler's and Drakulich et al.'s analysis, scholars have argued that the latter deals more directly with adjusted change and controls for possible time-stable confounders (2010; 2012; Dalecki and Willets 1991). Greenberg and West employed both approaches (2001).

F. Hypotheses

Based upon the theoretical concepts and literature previously discussed, I put forth the following hypotheses:

H1: Changes in concentrated disadvantage will be related to changes in coercive mobility, positively, controlling for rates of concentrated disadvantage at Time 1 and other measures (crime, residential mobility, etc.) at Time 2. Counties in which levels of coercive mobility increased will become increasingly disadvantaged over time.

H2: The number of congregations will mediate the effect of coercive mobility on concentrated disadvantage. High levels of coercive mobility will operate through the number of congregations to increase levels of disadvantage by depleting the networking capabilities found in religious organizations. This may result in fewer congregations in counties with high levels of coercive mobility relative to other counties.

H3: The number of congregations will moderate the relationship between coercive mobility and concentrated disadvantage. The magnitude of the effect of coercive mobility on concentrated disadvantage will be smaller in areas where the number of religious congregations is high.

Communities with a substantial number of religious congregations provide more of the social capital necessary to mitigate the negative impact of coercive mobility. These communities will experience less economic and social decline than comparable communities that lack religious resources.

H4: The degree of urbanity within counties will moderate the relationship between coercive mobility and concentrated disadvantage. The effect of coercive mobility on concentrated disadvantage will be stronger in counties that have more urban populations compared to other counties.

X. RESULTS

First, I summarize the descriptive statistics and bivariate correlations. Second, I discuss the results for cross-sectional models predicting CD in 2000 and CD in 2010. Third, I present the findings for the regressor variable models, in which concentrated disadvantage in 2010 is regressed on controls and concentrated disadvantage in 2000. Finally, summarize the results for

the models that predict changes in concentrated disadvantage, identified as the change score method.

Table 1 shows the descriptive statistics for variables used in the analyses for the present study. Variables are shown as percentages or per capita rates in order to be easily interpreted. Results for log transformations are also shown. At both points in time, the average total concentrated disadvantage (CD) for blacks was more than double that of nonblacks. Both groups experienced growth in concentrated disadvantage over time; the average level of CD increased over 20 percent for blacks from 2000 to 2010, while CD increased at just under 7 percent for nonblacks.

There are also racial differences in the coercive mobility and arrest measures over time. In 2000, African Americans were admitted to and released from prison at a rate of 134 per 10,000, which was approximately 6 times greater than the nonblack rate of 20 admissions and releases per 10,000. In 2010, there was a slight decrease in the coercive mobility rate from 134 to 132 per 10,000 for African Americans resulting in a negative change score. The nonblack coercive mobility rate increased in 2010 to 26 prison movements per 10,000. In 2000, blacks were arrested at rates more than 5 times greater than nonblacks for violent offenses. The rate of arrest for violent offenses increased for both groups in 2010. More specifically, African American violent arrests increased from nearly 33 to 43 per 10,000 and nonblack violent arrests increased from 6 to 9 per 10,000.

The level of residential mobility, or the percent of the population that moved to a new county during the preceding 5 years (1995 – 2000 or 2005 – 2010), decreased by more than half for both racial groups. The level of residential mobility was comparable across racial categories. In 2000, 20 percent of the black population moved to new counties while 18 percent of the

nonblack population moved. In 2010, these numbers decreased to 9 percent and 7 percent, respectively, resulting in negative change values. In 2000, the percentage of the black population with less than a high school degree or equivalent was more than double the value for the nonblack population. By 2010, both groups experienced a decrease, but the difference between the groups was still substantial. For African Americans, the percent of the population over the age of 25 with less than a high school education decreased from over 33 percent in 2000 to less than 24 percent in 2010. The results for the nonblack population indicate a decrease from 16 percent in 2000 to 8 percent in 2010. Both of these differences result in a negative change score, suggesting that levels of education improved for both racial groups over time.

From 2000 to 2010, the nonblack male population aged 15 to 29 decreased from 12 percent to 9 percent of the population. Over the same time period, the black male population aged 16 to 29 increased from 8 percent to 12 percent.

Three measures in the models are not race-specific: the percent urban, the congregation rate, and percent black. The percent living in urban places increased slightly from 56 percent in 2000 to nearly 58 percent in 2010. There was an average increase of approximately 3 congregations per 10,000 persons over the ten year period. On average, the rate of congregations was 15 per 10,000 county residents in 2000. In 2010, the average number of congregations increased to roughly 18 per 10,000 county residents. The percent of the population that was African American increased slightly from 2000 to 2010.

[INSERT TABLE 1 HERE]

Tables 2a and 2b display the results for the bivariate correlations of all variables in the models. Table 2a shows that the concentrated disadvantage factor is highly correlated with the total sum of concentrated disadvantage as one would expect since the former is comprised of the

later (r= .964). Both of these dependent variables show weak to moderate correlations with the independent variables that correspond to the same year. The two measures of concentrated disadvantage for both years reveal moderate to strong positive correlations with black low educational attainment (r< .500). Measures of residential mobility are negatively correlated with both measures of CD.

Concentrated disadvantage in 2000 is strongly correlated with concentrated disadvantage in 2010 (r= .789). Concentrated disadvantage had a positive, weak to moderate correlation with coercive mobility during both time periods. These findings indicate that the relationship between coercive mobility and disadvantage are also relatively stable over time.

Table 2b shows the bivariate correlations for the nonblack model. Findings are similar to those in the black model. Concentrated disadvantage is strongly correlated between years (r= .964 and r= .957) and is positively correlated with the violent arrest rate at both points in time. Similar to correlations among the black sample, there are negative correlations in the nonblack sample between both measures of CD in 2000 and 2010 and residential mobility at both points in time.

[INSERT TABLES 2A & 2B HERE]

Overall, the findings in table 2a and 2b indicate that most measures are stable over a 10 year period. Results reveal expected relationships between the dependent and independent variables. There are noteworthy differences between racial groups, particularly with regard to concentrated disadvantage and coercive mobility. At first glance, these findings suggest that coercive mobility is more strongly associated with concentrated disadvantage for nonblacks than blacks. One possibility is that already high levels of disadvantage among African American

communities limits the capacity for further destabilizing effects, such that the deleterious effects of coercive mobility are more likely to be detected in nonblack models.

I estimated several models assessing the relationship between concentrated disadvantage and coercive mobility. Cross-sectional analyses conducted to establish a baseline for the change models are shown in Tables 3a and 3b. Table 3a shows that models explain between 37 and 40 percent of the variance in black concentrated disadvantage in 2000. Consistent with Clear's (2007) argument, counties with higher rates of black coercive mobility have significantly higher rates of black concentrated disadvantage net of controls. As expected, counties with higher violent arrest rates, poorer educational attainment, higher percentages of young males, larger black populations, and/or more urban populations have higher levels of concentrated disadvantage. Lower levels of residential mobility were positively associated with black CD. These effects remained consistent across models.

Model 2 included a measure of the rate of religious congregations per 10,000 in a county. Congregation rate is positive and significant, suggesting that counties that had higher levels of black CD also had higher rates of religious congregations. Both black CM and the rate of congregations had independent positive effects on black CD in 2000. However, the effect of CM grew stronger once the main and interaction effects of congregation rates were included in the model, suggesting a possible suppression effect. Although areas with higher rates of CM tend to have higher congregation rates, some of the effect of CM on CD is mitigated by those institutions. In other words, there is a moderation effect, in that the effect of black CM is weaker in places with higher congregation rates. This suggests the strong positive effect of CM on CD is being lessened by the presence of religious institutions in communities.

[INSERT TABLE 3A & 3B HERE]

Model 4 incorporated an interaction between percent urban and CM. Results indicate that effect of CM on CD is conditional on counties' level of urbanity. In other words, the detrimental effect of CM on communities is significantly stronger in urban areas.

Model 5 in Table 3b provides the regression estimates of disadvantage on coercive mobility among nonblacks in 2000. Across models, r-squares indicate that approximately 39 to 41 percent of the variance in concentrated disadvantage is explained.

In many ways, the nonblack models are comparable to findings in the black models. Specifically, models show that counties with higher rates of nonblack coercive mobility had significantly higher rates of nonblack concentrated disadvantage net of controls. Counties that are more urban, have higher violent arrest rates, have lower educational attainment, and/or have more males age 15 to 29 had higher levels of concentrated disadvantage. Interestingly, counties with higher levels of residential mobility and larger black populations had lower levels of nonblack concentrated disadvantage.

A comparison across models shows that the main effect of CM remained positive and significant after incorporating the main and interaction effects of congregation rates and percent urban. Models 6 through 8 show that, unlike the black models, the main effect of congregation rate was not a significant predictor of CM. It did, however, have a moderating effect.

Similar to black models, Model 7 shows that the joint effect of congregations and nonblack CM was significant, indicating that the rate of congregations lessened the negative impacts of CM on nonblack CD in 2000. In addition, Model 8 tested the percent urban as a moderator between nonblack CM and nonblack CD, and found evidence of a moderating

relationship. The findings were positive and significant; the effect of nonblack CM is stronger in counties that have larger urban populations.

Table 3b provides the regression estimates for the effects of CM on CD in 2010 for blacks and nonblacks. Models accounts for 36 to 44 percent of the variance in levels of black CD in 2010. Similar to the results found in the previous models, counties with higher rates of black CM correspond to higher rates of black CD. The majority of the relationships that existed in 2000 remained significant in 2010. However, percent urban did reach statistical significance in model 1.

The inclusion of the rate of religious congregations in models 2 indicate that black CM and the number of congregations both had direct effects on black CD, but there was no mediating effect of congregations on black CD. The inclusion of the rate of religious congregations did change the effect of percent urban; it became statistically significant in model 2.

The number of congregations moderated the effect of black CM on CD (shown in model 3) such that the effect of black CM is significantly weaker in counties with more religious congregations. Model 4 includes the interaction of percent urban and black CM, revealing a significant moderating relationship in that the effects of black CM are stronger in urban areas. All of the relationships found in models 1 and 2 remained consistent in models 3 and 4 with the exception of black residential mobility.

Models 5 through 8 in table 3b display the regression estimates for the nonblack population for 2010. The majority of the relationships found in 2000 were also found in 2010. Percent black, however, was positively associated with nonblack CD in 2010; it corresponded to lower levels of nonblack CD in 2000. The inclusion of the rate of congregations in model 6 did not alter the effects of the other independent variables on nonblack CD in 2010. The rate of

congregations did directly impact nonblack CD, indicating that counties with higher levels of nonblack CD corresponded to higher rates of religious congregations.

Similar to the results found in Table 3a, Model 7 shows that the congregation rate significantly moderated the impact of nonblack CM on nonblack CD. Furthermore, the effect of nonblack CM on nonblack CD was significantly weaker in counties with higher religious congregation rates. The inclusion of the interaction term for percent urban and nonblack CM in model 8 shows there is a significant moderating relationship between nonblack CM and percent urban. Comparable to black models, the effects of nonblack CM were stronger in more urban counties.

Table 4 presents results from a set of models regressing CD in 2010 on the same set of independent variables and a measure of CD in 2000 as a covariate. According to Dalecki and Willets (1991) and Allison (1990), this is one technique that assesses change in the dependent variable while controlling for time-stable confounders. Table 4 displays the results from this approach.

The explained variance ranged from 62 to 64 percent across black models. The results in Models 1 through 4 indicate that black violent arrests and low levels of education were significant predictors of CD. Not surprisingly, disadvantage counties in 2000 were also more likely to have high levels of disadvantage in 2010. Black coercive mobility did not have a main effect on CD across models. Much of the current disadvantage among African Americans can be attributed to past disadvantage. As main effects, factors that theoretically should be positively associated with disadvantage, particularly coercive mobility, did not have a significant effect on disadvantage net of CD in 2000.

Model 2 includes the main effect of congregation rate, while Model 3 includes the interaction effect to test for its potential moderating effects of CM on CD. Results suggest that congregations had a direct positive effect on black CD; counties with high levels of black CD were associated with high rates of religious congregations. The effect of black CM was not moderated by congregation rates.

Model 4 includes the interaction term to test for a moderating effect of percent urban on the relationship between black CM and CD. The main effect is still nonsignificant, which along with the positive interaction, suggests that the detrimental effect of black CM on black CD is primarily experienced within concentrated areas-i.e., more urban counties. The significant positive effect indicates that the degree to which CM impacts counties' CD is dependent on their level of urbanity.

Comparable models for the nonblack population are in Models 5 through 8. Models accounted for 57 to 58 percent of the variance in nonblack CD. Similar to the black models, high levels of nonblack violent arrests, low levels of education, larger African American populations, the percent of the population that resides in urban places, and nonblack CD in 2000 were associated with high levels of nonblack CD in 2010. High levels of nonblack residential mobility rate corresponded to low levels of nonblack CD. Unlike in the black models, the models generally indicated a significant main effect of coercive mobility on nonblack CD, net of other variables. In particular, counties with higher levels of CM in 2010 were associated with increases in CD in 2010, net of levels of nonblack CD in 2000.

[INSERT TABLE 4 HERE]

Models 5 and 6 explored the possibility of a mediating effect, in that CM could have an indirect effect on CD through its impact of the effectiveness of religious congregations. There was little evidence of a mediation effect. Both CM and the congregation rate had significant main effects on CD, and the magnitude of the CM effect only decreased slightly once congregations were incorporated into the model. Overall, in comparing Models 5 and 6, findings suggest that much of the effect of nonblack CM is independent of the rate of religious congregations. Model 7 assessed whether the relationship between nonblack CM and nonblack CD was moderated by congregation rate, and found no significant interaction. Model 8 examined a second potential moderating relationship between nonblack CM and percent urban on nonblack CD, and again found no evidence to support this relationship.

Overall, the results suggested that, controlling for other factors, high rates of CM were directly associated with high levels of CD for nonblacks. The main effects were not significant for blacks. However, the effects of coercive mobility for African Americans are conditional on a county's percent of urban residents. The rate of congregations had a positive direct effect on CD for both racial groups, indicating that both disadvantaged black communities and disadvantaged nonblack communities tend to have more congregations per capita than counties with low rates of disadvantage.

For my final analyses, I ran models utilizing change score techniques. I estimated a set of models in which the dependent variable was the change in the total summed percent of concentrated disadvantage (Y2 – Y1). There are multiple ways to utilize change scores as the dependent variable in regression analyses, so I explored a variety of strategies in this regard (Allison 1990; Dalecki and Willits 1991). The independent variables were the same as those in the previous time regressor analyses, with the exception of the coercive mobility measure.

Coercive mobility was calculated as a change score (X2 – X1) so that change in the dependent variable was regressed on change in the primary independent variable controlling for time-stable confounders. Unfortunately, none of these additional models yielded particualry meaningful findings. Consequently, I will summarize selected models briefly and provide some of these results in Appendix A (complete results for single change score models will be provided upon request).

Initial models regressing change in black CD on black CM revealed there was not a significant relationship between these variables. Violent arrest rate and educational attainment was significantly related to black CD. Counties with high levels of black CD in 2000 tend to decrease in levels of black CD over time. This negative relationship is likely due to the tendency of Y1 measures to regress towards the mean (Allison 1990). As stated by Paul Allison, "individuals with high pretest scores will tend to move down on the posttest, while measures with low pretest scores will tend to move up" (1990: 95).

The inclusion of the rate of congregations indicated a significant direct effect on change in black CD. Counties that increased in black CD had also increased in rate of religious congregations. Model 3 assessed whether the relationship between change in black CM and change in black CD was moderated by congregation rate, and found no significant interaction. Model 4 tested a potential moderating relationship between change in black CM and percent urban on black CD, and found a marginally significant positive effect ($p < .10$). Introducing the interaction of percent urban and black CM into the model slightly altered the main effect of black CM on CD such that the effect of black CM on black CD was negative and marginally significant ($p < .10$). These findings indicated that black CD increased in urban counties with

high rates of black CM, while the negative main effect of black CM on CD suggests that black CM may be associated with a decrease in CD in rural counties.

Supplemental analysis also found that changes in nonblack CM were not significantly associated with CD in any of the models. Violent crime arrest rate, educational attainment, percent urban, and percent nonblack male aged 15-29, and increases in the percent of African American population were all associated with increases in nonblack CD over time. Similar to the black models, nonblack CD in 2000 was negatively associated with change in nonblack CD. This finding suggested that counties with high levels of nonblack CD in 2000 tended to decrease in nonblack CD over time, or counties with low levels of CD in 2000 increased in levels of CD faster over time. This finding is consistent across all four models. The inclusion of the number of congregations was positive and significant. Models including each of the interaction terms showed they did not reach statistical significance.

In addition to these models, I conducted several supplemental analyses to examine change in multiple ways, and address the considerable disagreement among scholars regarding the appropriateness of particular change score modeling strategies (Allison 1990). First, I removed the measure of concentrated disadvantage at T1. Allison suggests that doing so differentiates the change score model from the regressor variable approach (used in my initial models in Table 4). Otherwise, inclusion of the initial CD measure would make the two models computationally equivalent. Nevertheless, I found no difference across models in the relationships of interest.

Second, I regressed change in CD on *change in each predictor variable* while controlling CD at T1. Change in CM was not significant in any model for either blacks or nonblacks.

Concentrated disadvantage in 2000 was not significant in any of the black models, but was significant and negative in the nonblack models. The main and interaction effects of congregation rate were not significantly related to change in CD for blacks or nonblacks. The interaction of change in percent urban and change in black CM was significant for black CD. This finding suggested that the effects of black CM on black CD were lessened in counties where urban populations grew.

In sum, utilizing change score techniques did not meaningfully improve the analyses or provide additional information beyond that delivered in the time regressor models. These results are not surprising, given the notable unreliability of change scores, especially in situations where Time 1 and Time 2 measures are highly correlated (Allison 1990). Results for both supplemental change analyses are available upon request.

I also conducted additional analyses to confirm the robustness of the findings. First, one feature of highly disadvantaged places is higher rates of crime. Most studies that assess crime and disadvantage are either predicting violent crime, or control for violent crime. In addition to a measure of violence, Sampson and Loeffler included a measure of drug related offenses in their analyses. Their reason for doing so was that they wanted to have a measure of the rate of crime that included "those forms that tend to generate the most public attention and that have been implicated in the imprisonment run-up" (2010: 25). Sampson and Loeffler created a factor of "crime propensity" using principal components analysis that included violence (assault, rape, and homicide), drug-related offenses, robbery, and burglary rates. As a proxy of this strategy, I conducted several models that included the race-specific drug arrest rate as an independent variable. The first set of models regressed 2010 CD on 2010 CM while including 2000 CD as a

covariate, and I replaced the measure of violent arrest rates with drug arrest rates. The second set of models examined the same relationships, but included the violent arrest rates in the same model with a measure of drug arrests. These results are found in Appendix B.

The findings indicated that the drug arrest rate does not significantly predict increases in CD for either group. Furthermore, when the violent arrest rate was included in the models the drug arrest rate became significant and negative. The effect of coercive mobility did not experience much substantive change with the inclusion of the drug measure. Increases in black CM were associated with increases in black CD in model 1. However, including the violent arrest rate in model 2 reduced the effect of this relationship to non-significance. This finding suggested that the black violence measure had a stronger relationship with the black CD than black CM or the black drug arrest rate.

Similar results are found in the nonblack models. Nonblack coercive mobility is significant in both models, while the drug arrest rate was only significant with the inclusion of the nonblack violence measure. This finding indicated that the relationship between nonblack CD and the nonblack drug arrest rate is likely spurious, and substantively insignificant. In sum, the inclusion of the drug arrest rate did not alter the effects of coercive mobility on concentrated disadvantage found in previous models.

Second, I examined whether religious adherence rates mediated or moderated the relationship between CM and CD. Research on the relationship between crime and religion primarily uses a measure of religious adherence to capture the degree of religious social capital that may provide buffers against criminogenic conditions (e.g. concentrated disadvantage) within counties (Beyerlein and Hipp 2005; Lee and Bartkowsi, 2004). *Total religious adherence* was calculated as the proportion of the county's total population that adheres to a religious institution,

or the rate of adherence per 10,000 persons. The current paper uses the number of congregations as a measure of the amount of capital and structural presence provided by religious institutions. However, it was possible that the rate adherence would produce similar results given the theoretical relevance of this measure.

To examine this possibility, I repeated the analyses where CD in 2010 was regressed on predictors in 2010 while using CD in 2000 as a covariate. The results are displayed in Appendix C. In models 1 through 3, the relationship between black CM and black CD did not change with the inclusion of adherence rates, or the interaction term. In other words, adherence rates did not have a direct or indirect effect on black CD, nor did this measure alter the effect of black CM on black CD. In models 4 through 6, the inclusion of adherence rates did not change the relationship between nonblack CM and nonblack CD, but adherence rates did have a direct effect on nonblack CM such that counties that experienced increases in rates of adherence had decreases in nonblack CD. Furthermore, the effect of nonblack CM on nonblack CD became slightly stronger with the inclusion of the adherence rate, suggesting a suppression effect from model 4 to model 5. Nonblack coercive mobility has a significant effect on nonblack concentrated disadvantage, as seen in model 4, but religious adherence slightly counters that effect, as shown in model 5. The interaction term in model 6 did not reach statistical significance. In brief, using adherence rates in the place of the number of congregations did not change the relationships of interest.

Finally, I also tested the possibility that adherence to black Protestant religious congregations[3], rather than overall adherence rates, may moderate the relationship between CM and CD, particularly when measuring black CD. The RCMS data that included a measure of black Protestant adherence was only available in 2010, otherwise it would likely have been

[3] I thank the members of my committee for bringing this possibility to my attention.

included in all analyses. Including black Protestant adherence rates decreased the sample size to 659 counties. Historically, the black church provided more than spiritual guidance. These institutions united the black public, and provided welfare as well as political leadership for African American communities. Adherence rates to black religious congregations may be a better measure of social capital and networking for African American communities. Thus, it is possible that adherence to black Protestant congregations may moderate the impact of CM on CD such that high rates of black Protestant adherence may weaken the effect of CM on CD.

To examine this possibility, I repeated the same analyses used to test the effect of overall adherence rates. The inclusion of the interaction term (black Protestant adherence x black/nonblack coercive mobility) did not reach statistical significance for blacks or nonblacks. Moreover, black Protestant adherence did not moderate the relationship between CM and CD for either group. These results are available upon request. These results are displayed in Appendix D.

XI. DISCUSSION

The goal of the current study was to investigate the relationship between coercive mobility and disadvantage over time. In particular, I explored race-specific effects of congregation rate and percent urban on the relationship between coercive mobility and disadvantage. Analyses revealed that coercive mobility was positively and significantly related to concentrated disadvantage both cross-sectionally and over time. The results suggest that while high rates of incarceration do have deleterious macro-level effects, both among nonblack and urban black communities, the magnitude of this harm depends on a number of community factors.

Generally, among the cross-sectional models, rates of violent arrest, educational attainment, percent black, percent young males, and percent urban were associated with concentrated disadvantage for blacks and nonblacks. These findings are consistent with social disorganization theory as well as the later conceptualizations of this theory (Shaw and McKay 1942/2009; Bursik and Grasmick 1993; Sampson and Wilson 199; Sampson et al. 1997).

Findings corroborate the work of Clear and colleagues, and are consistent with Sampson and Loeffler's findings (2007; Rose and Clear 2001; Clear et al. 2003; 2010). Although Clear and colleagues were predicting crime rates as opposed to levels of disadvantage, their central thesis was that coercive mobility, or the prison cycling process, was detrimental to communities in multiple ways. The forced removal and reentry of relatively large segments of the community population interrupted family ties and informal and formal networks, which, in turn, interrupted social cohesion and unanimity needed for communities to foster effective community-level control. This lack of cohesion and control is conducive to crime, which is conducive to increased levels of disadvantage.

The current study tested four predictions. The first was that changes in coercive mobility would be positively related to changes in CD. Next, the study explored the possibility of mediating and moderating effects of the rate of religious congregations. Moreover, CM may operate through religious congregations to increase CD by depleting resources provided by churches, or religious congregations may provide the social capital necessary to combat the deleterious effects of CM on CD. Finally, the present analysis examined the possibility that the effect of CM on CD may be stronger in urban counties by including an interaction term.

My findings provide partial support for Hypothesis 1 and are consistent with the theoretical argument presented by Clear and other scholars (Clear 2007; Rose and Clear 2001;

Clear et al. 2003; Sampson and Loeffler 2010). The fact that the effects of CM on CD are consistent over a 10 year time period indicates the stability of this relationship. Furthermore, this relationship was found for both blacks and nonblacks at the county-level. Time regressor models that control for prior disadvantage, however, indicated that the effect of CM was entirely conditional on percent urban and congregation rate among blacks. The nonsignificant main effect is not surprising, in that the main effect would reflect the effect of CM in a county with no urban population (an unlikely circumstance).

Contrary to theoretical expectations, high levels of residential mobility were associated with low levels of concentrated disadvantage for both racial groups. Finding that coercive mobility (the forced removal and reentry of residents) corresponded to high levels of CD, while residential mobility (the voluntary movement of residents) was associated with low levels of CD has important implications. Specifically, it underscores the strong negative impacts associated with the prison cycling process that appear to be absent when examining the natural movement of people from county to county. However, it is possible that voluntary mobility (i.e. residential mobility) occurs when residents of more affluent counties move to counties with comparable levels of affluence, whereas residents of highly disadvantaged places lack the resources to move out of their current position.

I also found a strong link between counties' religious structure and disadvantage. Counties with higher levels of black CD had more congregations per capita compared to less disadvantaged counties. One possible explanation of this finding is that counties with fewer congregations may have religiously homogenous populations. More unified religious populations may allow congregations to more effectively mobilize resources needed to combat disadvantage. There was no evidence of a mediation effect, meaning that there was no support for Hypothesis

2. However, the importance of congregation rates in mitigating the impact of CM on CD varies substantially across communities. Specifically, the mitigating effect congregation rate on CD was apparent in black and nonblack communities, thus providing support for Hypothesis 3. Moreover, counties with a substantial number of religious congregations provide more of the social capital necessary to mitigate the negative impact of coercive mobility.

Hypothesis 4 was also confirmed in that the effect of CM on CD was stronger in more urban counties for both racial groups. Clear (2007) argues that one reason that coercive mobility is harmful to communities is that the communities that experience high rates of CM are often concentrated in poor places located in urban centers, and research finds evidence to support this (Sampson and Loeffler 2010; Clear et al. 2003; Fagan et al. 2003; Lynch and Sabol 2004b). These places lack formal and informal resources needed to combat the negative effects of removing relatively large segments of the population, and the subsequent return of ex-offenders back into the community. Thus, not only are urban centers more likely to suffer from a lack of resources, but they are also more likely to be disproportionately impacted by coercive mobility, which contributes to further disadvantage entrenchment.

Previous research that examined the relationship between race and disadvantage has examined the differences between racial groups regarding the impact of race-specific disadvantage on criminal outcomes (McNulty 2001). One feature that makes these types of comparisons difficult is the problem of "restrictive distributions," or the tendency for blacks to fall on the high end of the disadvantage spectrum while whites tend to fall on the low end (McNulty 2001:468). Moreover, there is more variation at low levels of concentrated disadvantage, which generally occurs within nonblack populations, than high levels of concentrated disadvantage, which is more likely to occur in the black population. Thus, when

levels of concentrated disadvantage are high, further increases in disadvantage will occur at lower rates compared to groups that start with lower levels of disadvantage.

My analyses provide evidence consistent with the notion of restrictive distributions. Interestingly, the effect of black CM on black CD was not significant when controlling for previous disadvantage. However, the effect of nonblack CM on nonblack CD was significant net of CD in 2000 and other predictors in 2010. It is possible that there was more variation in levels of nonblack CD at the county level than levels of black CD, thus the negative impact of CM was more evident when observing the nonblack population.

Yet, this relationship changed when the interaction term of percent urban and black CM was introduced into the model. Moreover, the results in Model 4 in Table 4 indicate that although black CM in 2010 does not have a significant main effect on black CD in 2010 when controlling for prior disadvantage, the interaction term suggests that the effect of black CM on black CD is conditional on location, specifically the level of urbanity that occurs in the county. Again, the nonsignificant main effect is not surprising, in that the main effect would reflect the effect of CM in a county with no urban population, which is highly unlikely. Thus, I did find support for Hypothesis 4. Black coercive mobility is most harmful to urban places, a finding which aligns closely with arguments proposed by Clear (2007). African Americans are more likely to be concentrated in urban areas, and high rates of coercive mobility are more likely to occur in urban areas. Consequently, finding that the impact of coercive mobility on concentrated disadvantage for blacks is conditional on higher percentages of urban populations is somewhat expected, and coincides with previous research (Clear et al. 2001; Sampson and Loeffler 2010).

In contrast to the findings for black CD, high rates of nonblack CM are associated with high levels of nonblack CD in 2010 net of prior disadvantage, and this relationship is not

conditional on a high percentage of urban populations at the county-level. Nonblack populations are less likely to be concentrated in urban places compared to black populations. In this line of reasoning, the impact of black CM on black CD is conditional on the degree of urbanity within a county. In other words, the effects of nonblack CM on nonblack CD occur more broadly because the nonblack population is more dispersed throughout the county, whereas the black population is more likely to be concentrated in specific areas of the county, thus the impact of black CM on black CD is conditional on an urban setting.

My analyses also indicated that high rates of black violent arrest and a high percentage of the black population with less than a high school education were associated with high levels of black concentrated disadvantage net of previous disadvantage. These findings are to be expected given their theoretical relevance and prevalence in previous research. Unsurprisingly, black CD in 2000 was a significant predictor of black CD in 2010, suggesting structural disadvantage is likely to remain relatively stable or increase slightly over time.

For the nonblack sample, high rates of violent arrest, high percentage of the nonblack population with less than a high education, large black populations, and large segments of the population residing in urban places were associated with high levels of nonblack CD in 2010 controlling for nonblack CD in 2000. Again, these relationships are not surprising given their theoretical relevance as well as the prominence in previous studies. Similar to the results found for the black sample, nonblack CD in 2000 was positively associated with nonblack CD in 2010, suggesting that concentrated disadvantage was highly stable over time.

The link between religious structures and concentrated disadvantage that was found in the cross sectional models was not as apparent in the longitudinal analysis. The rate of congregations was positively associated with concentrated disadvantage for both blacks and nonblacks.

However, the rate of congregations did not mitigate the deleterious effects of CM on CD once prior CD was incorporated into the models.

The results of the change analysis provided very few significant relationships. This is likely due to the lack of variation within units, meaning that very little change occurred within counties over the 10 year period. Nonetheless, a few relationships remained significant for each racial group. First, in the black sample, counties with high rates of violent arrest increased levels of black CD over time. In in counties where low levels of education for African Americans remained high, the level of black CD increased from 2000 to 2010. Both violence and low levels of education have been shown to directly impact disadvantage. Previous research that examined violent crime has also demonstrated a strong positive relationship between disadvantage and violence (Sampson et al. 1997; McNulty 2001).

Similar to the results found in previous models, the rate of congregations corresponded to increases in black and nonblack CD. Moreover, counties characterized by high levels of CD are likely to have more racially and/or ethnically diverse populations. More racial/ethnic diversity corresponds to more cultural diversity, which usually results in an assortment of religious affiliations. In other words, the fact that increases in CD for both racial groups was associated with more religious congregations was likely due to high levels of heterogeneity in people and culture found in disadvantage places. There was no evidence of a mediation effect of the rate of congregations on CM, thus there was no support for Hypothesis 2.

For the black population, CD increased more in urban counties with high rates of CM compared to counties with low rates of CM, which is consistent with Hypothesis 4. For blacks, increases in CM leading to increases in CD are conditional on highly urban places. Black populations within counties are often times concentrated in urban communities. Research finds

that these black urban communities were disproportionally impacted by mass incarceration, and, consequently, coercive mobility (Clear et al. 2003; Sampson and Loeffler 2010; Fagan et al. 2003; Lynch and Sabol 2004b). Thus, as proposed by Clear (2007), the effect of CM on CD matters more African Americans concentrated in urban settings because these areas are the most poorly resourced while also being subject to more scrutiny by the criminal justice system.

In the nonblack sample, high rates of nonblack violent arrest, a high percentage of the nonblack population with less than a high school degree, a high percentage of the population that is a nonblack, male aged 15 to 29, large African American populations, and a high percentage of the population residing in urban areas were all associated with increased levels of nonblack CD over a 10 year period. The majority of these relationships were found in previous analyses, thus their presence in the change analysis points to the stability of these findings across different methods of analyses, as well as consistency over time.

A. Limitations and Directions for Future Research

This study has several limitations and opportunities for future research. One limitation concerns the modeling specification and assumptions. My models use OLS techniques, which allow for increases in CM to predict linear increases in disadvantage, and decreases in CM to predict decreases in disadvantage. However, it is important whether the relationship is linear, in that structural disadvantage is probably more likely to increase or remain stable than to decrease over time. One must consider unidirectionality and the persistence of CM effects, including the possibility that neighborhoods' CD may not diminish in response to decreases in CM. Even after incarceration booms have declined, the harmful effects of significant increases in CM may persist as communities continue to struggle and/or further deteriorate. Our model cannot capture these possible effects, and thus may underestimate the true effect of CM.

Relatedly, the finding that CM was associated with nonblack CD but not black CD when accounting for previous CD is possibly related to recession effects. Black communities were more likely to be characterized by poverty and high rates of unemployment prior to the recession. Thus, the recession may have differentially affected black versus nonblack communities because economic downturns may not impact the chronically unemployed as much as the lower middle class and working poor. In other words, nonblacks may have sunk further and suffered more in 2010 relative to their economic position in 2000 than blacks did, because they had more potential for downward movement.

The current study was also limited to available data. The data restricted the unit of analysis to the county, which was a larger spatial unit compared to units of analyses found in previous studies. The theoretical framework proposed by Rose and Clear (1998) discussed the collateral consequences of coercive mobility at the neighborhood level. Clear et al.'s (2003) later work tested their theory using neighborhoods in Tallahassee, Florida defined through Tallahassee Neighborhood Services, Census tracts, and block groups. Sampson and Loeffler (2010) used a similar approach to examine concentrated incarceration in communities in Chicago, Illinois. Comparable to Clear et al. (2003), communities in Chicago were defined using Census tracts. It is possible that the majority of the effects of coercive mobility on concentrated disadvantage occurs in relatively small spatial units, thus the aggregate effect is less visible at the county-level.

The data was also restricted to two points in time. Given that mass incarceration started gaining speed in the early 1980s, it is possible that the majority of the damaging effects that the prison cycling process had on communities occurred sometime during 1980 to 2000. Thus, the current study may have failed to capture the most tumultuous time period(s), and instead captured the later points of the cycle of coercive mobility and disadvantage in which substantial

damage had already been done. In other words, it is possible that the largest effects of coercive mobility on concentrated disadvantage, as proposed by Clear (2007), occurred earlier.

Relatedly, changes in correctional policy as a response to mass incarceration were already taking place in many states during the 2000 to 2010 time period. In some places, rates of coercive mobility were already declining. These issues can be addressed in future analyses. In order to assess the consequences of coercive mobility over time, future research should include earlier and more frequent time periods, including those prior to start of the prison boom.

This study provides the first known macro-level empirical test of the long-term effects of coercive mobility on community disadvantage. Scholars have determined that cumulative aspects of disadvantage operate in conjunction with one another to create criminogenic environments; this study complements the existing literature by documenting how the mass incarceration of residents of these environments may, in turn, contribute to disadvantage entrenchment. The policy response to crime was harsh penalties paid by individual offenders, and more formal social control in general. Not foreseen, perhaps, was the long-term impact this has had on the residents within crime-prone places. The current study points to how the overuse of formal social control reproduces the ecological characteristics that are conducive to crime (i.e. disadvantage). The analyses also revealed the importance of religious institutions as mechanisms of networking, capital, and informal social control that operate to mitigate the collateral consequences of coercive mobility.

These findings are informative for policy responses. Clear and colleagues call for sentencing reform focusing specifically on eliminating mandatory sentencing of some offenders (such as drug offenders) and shortening the sentence length of post-release supervision terms to reduce revocations and reduce mass imprisonment (2007). The effect of incarceration is not

limited to only punishing the individual, but instead weakens entire communities by cycling large proportions of the population through this destabilizing process (2007). The findings in the current study add to Clear's argument by providing evidence that the overuse of incarceration over time depletes community resources leading to greater concentrated disadvantage. This underscores the failures of macro-level formal social controls in protecting communities, particularly urban communities, as justice system responses to crime hurt the places that needed them the most.

Consistent with Clear's (2007) suggestions, this study highlights the need to re-evaluate our response to crime, with an emphasis on community justice programs in high incarceration places, specifically urban places (Clear 2007). One component of this is community-based reentry programs. Finding that faith-based organizations moderate the impact of coercive mobility on disadvantage implies that programs that focus on promoting sources of informal social control, such as churches, schools, youth groups, and other community organizations should be a key feature in justice reform. Perhaps the most effective proactive approach to reduce crime in disadvantaged areas is to provide these areas with resources that provide networking opportunities to build community capital.

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XIII. TABLES

A. Table 1. Descriptive Statistics; N= 701

	2000				2010			
	Black		Nonblack		Black		Nonblack	
Race-Specific Variables	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Concentrated disadvantage PCA	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Total Concentrated disadvantage (%)	54.74	15.05	21.71	6.33	76.37	19.78	28.39	7.32
-- % poverty	27.25	9.89	10.64	4.16	28.42	10.19	12.59	4.57
-- % unemployed	6.19	2.20	2.88	1.00	14.12	5.13	6.92	2.18
-- % female headed houses	17.99	4.68	4.88	1.16	31.62	8.81	6.66	1.92
-- % public assistance	3.31	1.54	3.31	1.54	2.22	1.21	2.22	1.21
Coercive mobility rate	134.54	104.93	20.42	15.27	132.63	99.63	26.76	19.07
Centered CM rate	0.00	0.71	0.00	0.65	0.00	0.69	0.00	0.63
Violent arrest rate	33.02	27.85	6.68	5.77	43.78	32.21	9.74	8.00
Ln Violent arrest rate	3.23	0.84	1.82	0.68	3.55	0.77	10.74	8.00
Residential mobility (%)	20.74	12.43	18.71	6.76	9.30	7.17	7.04	3.26
Ln Residential mobility	2.94	0.52	2.87	0.35	2.15	0.59	2.02	0.35
Less than high school ed. (%)	33.43	11.73	16.38	9.84	23.82	9.11	8.48	3.98
Ln Less than high school ed.	3.44	0.41	2.72	0.51	3.09	0.43	2.13	0.56
Male crime-prone (%)	8.05	2.57	12.62	5.00	12.65	4.07	9.56	3.06

	2000		2010	
Non Race-Specific Variables	Mean	SE	Mean	SE
Urban (%)	56.10	29.45	57.95	29.36
Centered % Urban	0.00	1.09	0.00	1.03
Rate of Congregations	15.13	8.63	18.37	10.50
Ln Rate of Congregations	2.55	0.58	2.75	0.57
% Black	21.88	17.11	22.11	17.09
Ln % black	2.68	1.01	2.72	0.96

Table 1. Descriptive Statistics; N= 701

	2000				2010			
	Black		Nonblack		Black		Nonblack	
Race-Specific Variables	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Concentrated disadvantage PCA	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Total Concentrated disadvantage (%)	54.74	15.05	21.71	6.33	76.37	19.78	28.39	7.32
-- % poverty	27.25	9.89	10.64	4.16	28.42	10.19	12.59	4.57
-- % unemployed	6.19	2.20	2.88	1.00	14.12	5.13	6.92	2.18
-- % female headed houses	17.99	4.68	4.88	1.16	31.62	8.81	6.66	1.92
-- % public assistance	3.31	1.54	3.31	1.54	2.22	1.21	2.22	1.21
Coercive mobility rate	134.54	104.93	20.42	15.27	132.63	99.63	26.76	19.07
Centered CM rate	0.00	0.71	0.00	0.65	0.00	0.69	0.00	0.63
Violent arrest rate	33.02	27.85	6.68	5.77	43.78	32.21	9.74	8.00
Ln Violent arrest rate	3.23	0.84	1.82	0.68	3.55	0.77	10.74	8.00
Residential mobility (%)	20.74	12.43	18.71	6.76	9.30	7.17	7.04	3.26
Ln Residential mobility	2.94	0.52	2.87	0.35	2.15	0.59	2.02	0.35
Less than high school ed. (%)	33.43	11.73	16.38	9.84	23.82	9.11	8.48	3.98
Ln Less than high school ed.	3.44	0.41	2.72	0.51	3.09	0.43	2.13	0.56
Male crime-prone (%)	8.05	2.57	12.62	5.00	12.65	4.07	9.56	3.06

	2000		2010	
Non Race-Specific Variables	Mean	SD	Mean	SD
Urban (%)	56.10	29.45	57.95	29.36
Centered % Urban	0.00	1.09	0.00	1.03
Rate of Congregations	15.13	8.63	18.37	10.50
Ln Rate of Congregations	2.55	0.58	2.75	0.57
% Black	21.88	17.11	22.11	17.09
Ln % black	2.68	1.01	2.72	0.96

Table 1. Descriptive Statistics; N= 701 (Cont.)

Change			
Black		Nonblack	
Mean	SD	Mean	SD
--	--	--	--
21.63	12.17	6.68	4.73
1.17	6.59	1.95	2.65
7.91	4.99	4.04	2.01
13.63	6.84	1.77	1.62
-1.09	1.34	-1.09	1.34
-1.91	57.51	6.33	10.71
--	--	--	--
10.77	28.21	3.06	7.03
--	--	--	--
-11.44	8.88	-11.67	5.02
--	--	--	--
-9.6	6.35	-7.9	10.86
--	--	--	--
4.61	3.67	-3.07	5.11

Change	
Mean	SD
1.84	4.94
--	--
3.24	3.99
--	--
0.23	2.88

	--	--

Table 1. Descriptive Statistics; N= 701 (Cont.)

Note: Measures of public assistance are not race-specific. Centered variables are calculated as the mean of the logged variable subtracted from logged variable.

B. Table 2a. Bivariate Correlations for Black Sample

		2000									
		CD PCA	% CD	CM	Vio.	Res. Mob.	Edu.	MCP	% Black	Urban	Cong.
2000	CD PCA	1	.963**	.209**	.160**	-.440**	.386**	-.171**	.297**	0.053	.258**
	% CD		1	.165**	.126**	-.440**	.495**	-.184**	.313**	-0.024	.343**
	CM Rate			1	.395**	0.027	-.139**	.302**	-.405**	.349**	-.171**
	Vio.				1	-.083*	-.102**	.170**	-.259**	.219**	-.140**
	Res. Mob.					1	-.481**	.537**	-.551**	.232**	-.398**
	Edu.						1	-.455**	.452**	-.438**	.578**
	MCP							1	-.656**	.359**	-.327**
	% Blk								1	.300**	.330**
	Urban									1	-.526**
	Cong.										1

Table 2a. Bivariate Correlations for Black Sample (Cont.)

2010									
CD PCA	% CD	CM	Vio.	Res. Mob.	Edu.	MCP	% Black	Urban	Cong.
.766**	.770**	.248**	.219**	-.249**	.410**	-0.069	.300**	0.010	.328**
.763**	.789**	.230**	.176**	-.234**	.506**	-0.023	.314**	-0.068	.403**
.153**	.135**	.803**	.402**	0.028	-.156**	-0.043	-.402**	.347**	-.205**
.174**	.144**	.363**	.605**	-0.043	-.105**	-0.058	-.267**	.227**	-.136**
-.405**	-.425**	0.052	0.007	.733**	-.476**	.516**	-.499**	.240**	-.472**
.378**	.407**	-.086*	-.136**	-.281**	.863**	-0.046	.403**	-.451**	.591**
-.176**	-.186**	.355**	.239**	.490**	-.421**	.463**	-.659**	.375**	-.423**
-.265**	-.273**	.424**	.286**	.370**	-.408**	.243**	.984**	.325**	.467**
-0.021	-0.020	.339**	.308**	.253**	-.429**	.107**	-.276**	.945**	-.495**
-0.011	-0.044	.292**	.370**	0.054	-.503**	0.065	.286**	.516**	.956**

Table 2a. Bivariate Correlations for Black Sample (Cont.)

2010									
CD PCA	% CD	CM	Vio.	Res. Mob.	Edu.	MCP	% Black	Urban	Cong.
1	.978**	.201**	.230**	-.225**	.444**	-0.031	.238**	-0.060	.405**
	1	.188**	.202**	-.236**	.468**	-0.059	.276**	-0.060	.432**
		1	.423**	.092*	-.103**	.080*	-.473**	.329**	-.143**
			1	0.035	-.125**	0.058	-.348**	.310**	-.175**
				1	-.297**	.603**	-.439**	.264**	-.339**
					1	-0.034	.436**	-.450**	.591**
						1	-.386**	.088*	-.129**
							1	.265**	.424**
								1	-.531**
									1

Table 2a. Bivariate Correlations for Black Sample (Cont.)

*p< .05; **p< .01; N= 701

Note: Coercive mobility, violent arrest, and number of congregations are rates. Violent arrest, residential mobility, education, % black, and rate of congregations are log transformed. Coercive mobility and % urban are centered on their mean. Measures of % urban and rate of congregations are not race specific.

C. Table 2b. Bivariate Correlations for Nonblack Sample

		2000									
		CD PCA	% CD	CM	Vio.	Res. Mob.	Edu.	MCP	% Black	Urban	Cong.
2000	CD PCA	1	.964**	.435**	.360**	-.324**	.241**	.139**	-0.062	.112**	.090*
	% CD		1	.405**	.316**	-.314**	.353**	.128**	0.025	0.02	.224**
	CM Rate			1	.366**	-.106**	0.071	-0.038	-.106**	.197**	0.054
	Vio.				1	-.187**	0.021	-0.064	-.125**	.125**	-0.049
	Res. Mob.					1	-.249**	0.057	-0.002	-0.04	-.167**
	Edu.						1	-.135**	.705**	-.493**	.573**
	MCP							1	-.337**	.076*	-0.046
	% Black								1	-.321**	.330**
	Urban									1	-.526**
	Cong.										1

Table 2b. Bivariate Correlations for Nonblack Sample (Cont.)

2010									
CD PCA	% CD	CM	Vio.	Res. Mob.	Edu.	MCP	% Black	Urban	Cong.
.724**	.757**	.448**	.360**	-0.022	.285**	.281**	-.090*	.085*	.105**
.688**	.770**	.450**	.325**	-0.008	.290**	.282**	-0.011	-0.013	.241**
.436**	.447**	.774**	.345**	0.022	.336**	.110**	-.120**	.193**	0.052
.343**	.312**	.306**	.505**	-.123**	.219**	0.021	-.154**	.131**	-0.043
-.288**	-.270**	-.180**	-.192**	.704**	-.159**	.173**	-0.007	0.006	-.194**
.240**	.321**	.143**	0.046	-.113**	-.078*	-.083*	.668**	-.517**	.649**
.091*	.104**	0.028	-0.032	.179**	0.047	.268**	-.335**	0.057	-.097*
-0.061	0.005	-.126**	-.137**	.106**	-.277**	-.146**	.984**	-.333**	.467**
.140**	.091*	.098**	.125**	.087*	0.017	.122**	-.276**	.945**	-.495**
.088*	0.024	-0.013	.123**	-.169**	-0.001	0.033	-.415**	.516**	.956**

Table 2b. Bivariate Correlations for Nonblack Sample (Cont.)

2010									
CD PCA	% CD	CM	Vio.	Res. Mob.	Edu.	MCP	% Black	Urban	Cong.
1	.957**	.449**	.372**	-.080*	.351**	.201**	-.075*	.133**	.143**
	1	.473**	.349**	-0.031	.380**	.247**	-0.018	.076*	.261**
		1	.318**	-0.053	.397**	.112**	-.134**	.087*	.184**
			1	-.102**	.234**	.098**	-.142**	.129**	-0.063
				1	-.155**	.324**	.105**	.110**	-.130**
					1	0.02	-.302**	0.034	.125**
						1	-.143**	.124**	-.099**
							1	-.290**	.424**
								1	-.531**
									1

Table 2b. Bivariate Correlations for Nonblack Sample (Cont.)

*p< .05; **p< .01; N= 701

Note: Coercive mobility, violent arrest, and number of congregations are rates. Violent arrest, residential mobility, education, % black, and rate of congregations are log transformed. Coercive mobility and % urban are centered on their mean. Measures of % urban and rate of congregations are not race specific.

D. Table 3a. OLS Regression of Concentrated Disadvantage in 2000 on Coercive Mobility and Other Predictors

	Black							
	Model 1		Model 2		Model 3		Model 4	
Variable	b	SE	b	SE	b	SE	b	SE
Constant	-2.915**	0.530	-3.269**	0.540	-3.386**	0.530	-3.569**	0.530
Centered CM	0.326**	0.050	0.327**	0.050	1.079**	0.200	0.299**	0.050
Ln Violent Crime Rate	0.107*	0.040	0.117*	0.040	0.100*	0.040	0.106*	0.040
Ln Residential Mobility	-0.470**	0.080	-0.418**	0.080	-0.403**	0.080	-0.406**	0.080
Ln Ed. Attainment	0.799**	0.090	0.675**	0.100	0.650**	0.100	0.683**	0.100
Male Crime-Prone	0.056*	0.020	0.053*	0.020	0.055*	0.020	0.051*	0.020
Ln % Black	0.284**	0.050	0.288**	0.050	0.301**	0.050	0.296**	0.050
Centered Urban	0.178**	0.030	0.221**	0.040	0.259**	0.040	0.354**	0.040
Ln Cong. Rate	--	--	0.237*	0.070	0.291**	0.070	0.321**	0.070
CM*Cong.	--	--	--	--	-0.310**	0.080	--	--
CM*Urban	--	--	--	--	--	--	0.201**	0.040
R^2	.369		.379		.393		.399	

Table 3a. OLS Regression of Concentrated Disadvantage in 2000 on Coercive Mobility and Other Predictors (Cont.)

Nonblack							
Model 5		Model 6		Model 7		Model 8	
b	SE	b	SE	b	SE	b	SE
-1.284*	0.410	-1.150*	0.430	-0.926*	0.430	-1.047*	0.420
0.415**	0.050	0.422**	0.050	1.108**	0.210	0.413**	0.050
0.272**	0.050	0.267**	0.050	0.237**	0.050	0.249**	0.050
-0.444**	0.090	-0.454**	0.090	-0.475**	0.090	-0.478**	0.090
0.827**	0.100	0.864**	0.110	0.744**	0.110	0.787**	0.110
0.029*	0.010	0.029**	0.010	0.029**	0.010	0.030**	0.010
-0.207**	0.050	-0.210**	0.050	-0.178**	0.050	-0.189**	0.050
0.147**	0.030	0.133**	0.040	0.150**	0.040	0.195**	0.040
--	--	-0.075	0.070	-0.020	0.070	-0.030	0.070
--	--	--	--	-0.269*	0.080	--	--
--	--	--	--	--	--	0.178**	0.040
.389		.390		.401		.407	

E. Table 3b. OLS Regression of Concentrated Disadvantage in 2010 on Coercive Mobility and Other Predictors (Cont.)

	Black							
	Model 1		Model 2		Model 3		Model 4	
Variable	b	SE	b	SE	b	SE	b	SE
Constant	-4.585**	0.350	-5.156**	0.350	-5.142**	0.350	-5.357**	0.340
Centered CM	0.374**	0.050	0.333**	0.050	1.052**	0.190	0.319**	0.050
Ln Violent Crime Rate	0.326**	0.050	0.327**	0.040	0.298**	0.040	0.280**	0.040
Ln Residential Mobility	-0.167*	0.070	-0.123†	0.070	-0.095	0.070	-0.111†	0.070
Ln Ed. Attainment	0.826**	0.090	0.613**	0.090	0.616**	0.090	0.646**	0.090
Male Crime-Prone	0.029*	0.010	0.027*	0.010	0.023*	0.010	0.025*	0.010
Ln % Black	0.316**	0.050	0.258**	0.050	0.259**	0.040	0.260**	0.040
Centered Urban	0.041	0.040	0.130**	0.040	0.168**	0.040	0.315*	0.050
Ln Congregations	--	--	0.481**	0.070	0.499**	0.070	0.552**	0.070
CM*Cong.	--	--	--	--	-0.268**	0.070	--	--
CM*Urban	--	--	--	--	--	--	0.269**	0.040
R^2	.362		.401		.415		.436	

Table 3b. OLS Regression of Concentrated Disadvantage in 2010 on Coercive Mobility and Other Predictors (Cont.)

Nonblack							
Model 5		Model 6		Model 7		Model 8	
b	SE	b	SE	b	SE	b	SE
-1.403**	0.280	-2.002**	0.320	-1.953**	0.320	-1.992**	0.320
0.448**	0.060	0.392**	0.060	1.175**	0.220	0.388**	0.060
0.026**	0.000	0.028**	0.000	0.024**	0.000	0.027**	0.000
-0.269*	0.100	-0.223*	0.100	-0.233*	0.100	-0.242*	0.100
0.359**	0.060	0.311**	0.060	0.342**	0.060	0.330**	0.070
0.059**	0.010	0.058**	0.010	0.054**	0.010	0.057**	0.010
0.123*	0.040	0.058	0.040	0.065	0.040	0.065	0.040
0.094*	0.030	0.161**	0.040	0.189**	0.040	0.188**	0.040
--	--	0.283**	0.070	0.279**	0.070	0.277**	0.070
--	--	--	--	-0.288**	0.080	--	--
--	--	--	--	--	--	0.093*	0.050
.325		.339		.352		.343	

Note: The dependent variable is PCA factor of concentrated disadvantage. Measures of coercive mobility and % urban are centered around their mean. Measures of % urban and number of congregations are not race specific.
†p< .10; *p < .05; **p< .001; N= 701

F. Table 4. OLS Regression of Concentrated Disadvantage in 2010 on Coercive Mobility and Other Predictors Controlling for Concentrated Disadvantage in 2000

	Black							
	Model 1		Model 2		Model 3		Model 4	
Variable	b	SE	b	SE	b	SE	b	SE
Constant	-1.684**	0.303	-2.152**	0.310	-2.178**	0.311	-2.353**	0.312
Centered CM	0.028	0.045	0.015	0.044	0.181	0.159	0.021	0.044
Ln Vio. Arrest Rate	0.136**	0.036	0.144**	0.035	0.139*	0.035	0.129**	0.035
Ln Res. Mobility	-0.046	0.054	-0.023	0.053	-0.018	0.053	-0.021	0.053
Ln Ed. Attainment	0.379**	0.071	0.263**	0.073	0.267*	0.073	0.291**	0.073
Male Crime-Prone	0.008	0.008	0.007	0.007	0.007	0.007	0.007	0.007
Ln % Black	0.006	0.038	-0.018	0.037	-0.015	0.038	-0.007	0.037
Centered % Urban	-0.024	0.028	0.034	0.029	0.043	0.03	0.121*	0.038
CD in 2000	0.656**	0.030	0.631**	0.030	0.625**	0.031	0.607**	0.031
Ln Cong. Rate	--	--	0.300**	0.055	0.306**	0.056	0.339**	0.056
CM*Cong. Rate	--	--	--	--	-0.061	0.056	--	--
CM*Urban	--	--	--	--	--	--	0.121**	0.034
R^2	.619		.635		.635		.641	

Table 4. OLS Regression of Concentrated Disadvantage in 2010 on Coercive Mobility and Other Predictors Controlling for Concentrated Disadvantage in 2000 (Cont.)

Nonblack							
Model 5		Model 6		Model 7		Model 8	
b	SE	b	SE	b	SE	b	SE
-0.581*	0.225	-0.992**	0.258	-0.991**	0.258	-0.988**	0.258
0.152*	0.047	0.118*	0.048	0.278	0.18	0.117*	0.048
0.011*	0.003	0.012*	0.003	0.011*	0.004	0.012**	0.003
-0.174*	0.078	-0.144†	0.078	-0.147†	0.078	-0.138*	0.079
0.234**	0.051	0.203**	0.051	0.210**	0.052	0.197**	0.052
0.010	0.009	0.010	0.009	0.010	0.009	0.010	0.009
0.083*	0.029	0.040	0.032	0.042	0.032	0.038	0.032
0.082*	0.026	0.127**	0.029	0.133**	0.03	0.118**	0.031
0.605**	0.03	0.597**	0.03	0.592*	0.03	0.601**	0.03
--	--	0.189*	0.059	0.189*	0.059	0.190*	0.059
--	--	--	--	-0.058	0.063	--	--
--	--	--	--	--	--	-0.028	0.037
.574		.581		.581		.581	

Note: The dependent variable is concentrated disadvantage in 2010 calculated using PCA factor analysis. The measure of concentrated disadvantage in 2000 is also calculated using PCA factor analysis. All other independent variables are measured in 2010. Measures of coercive mobility and % urban are centered on their means. Measures of religious congregations and percent urban are not race specific.

†p< .10; *p < .05; **p< .001; N= 701

XIV. Appendices

Appendix A. OLS Regression of Change in Concentrated Disadvantage from 2000 to 2010 on Change in Coercive Mobility Controlling for Concentrated Disadvantage in 2000 and Other Predictors in 2010

	Black							
	Model 1		Model 2		Model 3		Model 4	
Variable	b	SE	b	SE	b	SE	b	SE
Constant	0.624	5.958	-12.149†	6.282	-12.025†	6.294	-11.906†	6.274
Change in CM	0.009	0.008	0.003	0.008	0.017	0.038	-0.087†	0.053
Ln Vio. Arrest Rate	2.545**	0.689	2.672**	0.675	2.675**	0.675	2.700**	0.674
Ln Res. Mobility	-0.822	1.056	-0.279	1.039	-0.256	1.041	-0.331	1.038
Ln Ed. Attainment	5.301**	1.444	3.273*	1.462	3.271*	1.462	3.265*	1.459
Male Crime-Prone	-0.114	0.148	-0.117	0.145	-0.122	0.146	-0.113	0.144
Ln % Black	0.608	0.637	0.217	0.628	0.199	0.630	0.209	0.627
Ln % Urban	0.520	0.526	1.631*	0.554	1.631*	0.554	1.657*	0.553
% CD in 2000	-0.088*	0.038	-0.130**	0.038	-0.129*	0.038	-0.131*	0.038
Ln Cong. Rate	--	--	6.026**	1.097	6.000**	1.099	5.970**	1.096
Change CM*Cong. Rate	--	--	--	--	-0.005	0.014	--	--
Chang CM*Ln Urban	--	--	--	--	--	--	0.022†	0.013
R^2	.049		.088		.089		.092	

Appendix A (Cont.)

Appendix A. OLS Regression of Change in Concentrated Disadvantage from 2000 to 2010 on Change in Coercive Mobility Controlling for Concentrated Disadvantage in 2000 and Other Predictors in 2010 (Cont.)

Nonblack							
Model 5		Model 6		Model 7		Model 8	
b	SE	b	SE	b	SE	b	SE
0.935	1.613	-4.818*	1.889	-4.722*	1.912	-5.223*	1.966
0.005	0.016	-0.013	0.016	-0.04	0.083	0.038	0.069
0.073*	0.023	0.085**	0.022	0.085**	0.022	0.085**	0.022
-0.568	0.526	-0.244	0.518	-0.236	0.519	-0.222	0.519
2.392**	0.335	2.016**	0.335	2.019**	0.335	2.012**	0.335
0.133*	0.062	0.142*	0.061	0.143*	0.061	0.141*	0.061
0.721**	0.197	0.244	0.211	0.244	0.211	0.236	0.211
0.658**	0.174	1.143**	0.191	1.143**	0.191	1.231**	0.224
-0.218**	0.031	-0.258**	0.031	-0.259**	0.031	-0.258**	0.031
--	--	2.219**	0.400	2.179**	0.418	2.241**	0.401
--	--	--	--	0.009	0.028	--	--
--	--	--	--	--	--	-0.013	0.018
.133		.170		.170		.171	

Note: The dependent variable is the change in concentrated disadvantage from 2000 to 2010. The measures of concentrated disadvantage are calculated as the sum of % poverty, % unemployed, % female-headed homes, and % public assistance. Change in coercive mobility is calculated as the difference between CM in 2000 and CM in 2010. All independent variables except CM and CD are measured in 2010. Measures of the rate of religious congregations and percent urban are not race specific.

†p< .10; *p < .05; **p< .001; N= 701

Appendix B.

Appendix B. OLS Regression of Concentrated Disadvantage in 2010 on Coercive Mobility, Drug Arrest Rates, and Other Predictors Controlling for Concentrated Disadvantage in 2000

	Black				Nonblack			
	Model 1		Model 2		Model 3		Model 4	
Variable	b	SE	b	SE	b	SE	b	SE
Constant	-1.243*	0.526	-1.350*	0.519	-1.246**	0.275	-1.230**	0.273
Coercive Mobility	0.081*	0.045	0.065	0.044	0.182**	0.047	0.164*	0.047
Ln Drug Crime Rate	-0.002	0.034	-0.080*	0.037	-0.040	0.036	-0.077*	0.037
Ln Residential Mobility	-0.057	0.055	-0.045	0.054	-0.196	0.078	-0.17*	0.078
Ln Ed. Attainment	0.354**	0.070	0.375**	0.069	0.248**	0.051	0.240**	0.051
Male Crime-Prone	0.010	0.007	0.010	0.007	0.011	0.009	0.010	0.009
Ln % Nonblack	-0.048	0.120	-0.090	0.119	--	--	--	--
Ln % Black	--	--	--	--	0.075*	0.029	0.075*	0.029
Ln % Urban	-0.006	0.029	-0.010	0.028	0.097**	0.027	0.095**	0.026
CD in 2000	0.671**	0.030	0.635**	0.031	0.627**	0.029	0.602**	0.03
Ln Violent Crime Rate	--	--	0.180**	0.039	--	--	0.013**	0.004
R^2	.611		.622		.569		.577	

Note: The dependent variable is concentrated disadvantage in 2010 calculated using PCA factor analysis. The measure of concentrated disadvantage in 2000 is also calculated using PCA factor analysis. All other independent variables are measured in 2010. Measures of religious congregations and percent urban are not race specific.
*p < .05; **p< .001; N= 701

Appendix C.

Appendix C. OLS Regression of Concentrated Disadvantage in 2010 on Coercive Mobility, Adherence Rates, and Other Predictors Controlling for Concentrated Disadvantage in 2000

	Black					
	Model 1		Model 2		Model 3	
Variable	b	SE	b	SE	b	SE
Constant	-1.224*	0.517	-1.279*	0.521	-4.217	2.455
Coercive Mobility	0.046	0.043	0.040	0.044	-0.363	0.332
Ln Violent Crime Rate	0.142**	0.035	0.142**	0.035	0.141**	0.035
Ln Residential Mobility	-0.040	0.054	-0.032	0.055	-0.025	0.055
Ln Ed. Attainment	0.374**	0.069	0.366*	0.070	0.362**	0.070
Male Crime-Prone	0.009	0.007	0.009	0.007	0.009	0.007
Ln % Nonblack	-0.136	0.117	-0.132	0.117	-0.129	0.117
Ln % Black	--	--	--	--	--	--
Ln % Urban	-0.024	0.028	-0.028	0.028	-0.033	0.028
CD in 2000	0.644**	0.030	0.642**	0.031	0.640**	0.031
Ln Adherence Rates			0.000	0.000	0.000	0.000
Ln Interaction (CM * Adherence)	--	--	--	--	0.395	0.322
R^2	.620		.620		.621	

Appendix C (Cont.)

Appendix C. OLS Regression of Concentrated Disadvantage in 2010 on Coercive Mobility, Adherence Rates, and Other Predictors Controlling for Concentrated Disadvantage in 2000 (Cont.)

Nonblack					
Model 4		Model 5		Model 6	
b	SE	b	SE	b	SE
-1.368**	0.266	-1.219**	0.271	-0.432	0.604
0.152*	0.047	0.181**	0.048	0.319*	0.106
0.011*	0.003	0.010*	0.003	0.010*	0.003
-0.174*	0.078	-0.211*	0.079	-0.226*	0.080
0.234**	0.051	0.232**	0.051	0.238**	0.051
0.010	0.009	0.009	0.009	0.010	0.009
--	--	--	--	--	--
0.083*	0.029	0.099*	0.030	0.103*	0.030
0.082*	0.026	0.095**	0.026	0.102**	0.027
0.605**	0.03	0.601**	0.030	0.595**	0.03
		< - .01*	0.000	< - .01	0.000
--	--	--	--	-0.115	0.079
.574		.578		.580	

Note: The dependent variable is concentrated disadvantage in 2010 calculated using PCA factor analysis. The measure of concentrated disadvantage in 2000 is also calculated using PCA factor analysis. All other independent variables are measured in 2010. Measures of religious adherence rates and percent urban are not race specific.

*p < .05; **p< .001; N= 701

Appendix D.

Appendix D. OLS Regression of Concentrated Disadvantage in 2010 on Coercive Mobility, Black Protestant Adherence Rates, and Other Predictors Controlling for Concentrated Disadvantage in 2000

	Black					
	Model 1		Model 2		Model 3	
Variable	b	SE	b	SE	b	SE
Constant	-1.454*	0.520	-2.342**	0.655	-2.196*	0.664
Coercive Mobility	0.057	0.045	0.069	0.045	0.036	0.051
Ln Violent Crime Rate	0.158**	0.036	0.162**	0.036	0.164**	0.036
Ln Residential Mobility	-0.008	0.056	0.021	0.058	0.024	0.058
Ln Ed. Attainment	0.434**	0.072	0.404**	0.073	0.406**	0.073
Male Crime-Prone	0.004	0.008	0.007	0.008	0.006	0.008
Ln % Nonblack	-0.136	0.117	-0.018	0.128	0.003	0.129
Ln % Black	--	--	--	--	--	--
Ln % Urban	-0.041	0.030	-0.038	0.029	-0.040	0.029
CD in 2000	0.620**	0.032	0.610**	0.032	0.615**	0.032
Ln Black Prot. Adh.	--	--	0.057*	0.026	0.032	0.032
Interaction (CM * Black Prot. Adh.)	--	--	--	--	< .01	0.000
R^2	.608		.611		.612	

Appendix D (Cont.)

Appendix D. OLS Regression of Concentrated Disadvantage in 2010 on Coercive Mobility, Black Protestant Adherence Rates, and Other Predictors Controlling for Concentrated Disadvantage in 2000 (Cont.)

Nonblack					
Model 4		Model 5		Model 6	
b	SE	b	SE	b	SE
-1.235**	0.281	-1.270**	0.291	-1.420**	0.316
0.170**	0.048	0.169**	0.048	0.202**	0.055
0.009*	0.004	0.009*	0.004	0.009*	0.004
-0.165*	0.082	-0.162*	0.082	-0.169*	0.082
0.224**	0.053	0.221**	0.053	0.214**	0.053
0.007	0.010	0.008	0.01	0.008	0.010
--	--	--	--	--	--
0.072*	0.031	0.055	0.048	0.053	0.048
0.053†	0.029	0.055†	0.029	0.056†	0.029
0.588**	0.032	0.587**	0.032	0.585**	0.032
--	--	0.014	0.031	0.036	0.035
--	--	--	--	< -.01	0.000
.549		.549		.550	

Note: The dependent variable is concentrated disadvantage in 2010 calculated using PCA factor analysis. The measure of concentrated disadvantage in 2000 is also calculated using PCA factor analysis. All other independent variables are measured in 2010. Measures of religious adherence rates and percent urban are not race specific.

†p< .10*p < .05; **p< .001; N= 659

Appendix E. IRB Protocol Approval Form

UNIVERSITY OF ARKANSAS

Office of Research Compliance
Institutional Review Board

MEMORANDUM April 21, 2015

TO:

FROM: Ro Windwalker
IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 15-03-639

Protocol Title: *Concentrated Disadvantage and Coercive Mobility: A Longitudinal Analysis of the Impact of Coercive Mobility*

Review Type: ☒ EXEMPT ☐ EXPEDITED ☐ FULL IRB

Approved Project Period: Start Date: 04/20/2015 Expiration Date: 04/19/2016

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (https://vpred.uark.edu/units/rscp/index.php). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

If you wish to make *any* modifications in the approved protocol, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 109 MLKG Building, 5-2208, or irb@uark.edu.

109 MLKG • 1 University of Arkansas • Fayetteville, AR 72701-1201 • (479) 575-2208 • Fax (479) 575-6527 • Email irb@uark.edu

IRB Project Number

UNIVERSITY OF ARKANSAS INSTITUTIONAL REVIEW BOARD PROTOCOL FORM

The University Institutional Review Board recommends policies and monitors their implementation, on the use of human beings as subjects for physical, mental, and social experimentation, in and out of class. . . . Protocols for the use of human subjects in research and in class experiments, whether funded internally or externally, must be approved by the (IRB) or in accordance with IRB policies and procedures prior to the implementation of the human subject protocol. . . Violation of procedures and approved protocols can result in the loss of funding from the sponsoring agency or the University of Arkansas and may be interpreted as scientific misconduct. *(see Faculty Handbook)*

Supply the information requested in items 1-14 as appropriate. **Type** entries in the spaces provided using additional pages as needed. In accordance with college/departmental policy, submit the original **and** one copy of this completed protocol form and all attached materials to the appropriate Human Subjects Committee. In the absence of an IRB-authorized Human Subjects Committee, submit the original of this completed protocol form and all attached materials to the IRB, Attn: Compliance Officer, MLKG 109, 575-2208. Completed form and additional materials may be emailed to irb@uark.edu. The fully signed signature page may be scanned and submitted with the protocol, by FAX (575-6527) or via campus mail.

1. Title of Project: Concentrated Disadvantage and Coercive Mobility: A Longitudinal Analysis of the Impact of Coercive Mobility

2. (Students **must** have a faculty member supervise the research. The faculty member must sign this form and all researchers and the faculty advisor should provide a campus phone number.)

	Name	Department	Email Address	Campus Phone
Principal Researcher	Megan Handley	Sociology/ Criminal Justice	mhandley@uark.edu	575-3205
Co-Researcher				
Co-Researcher				
Co-Researcher				
Faculty Advisor	Dr. Mindy Bradley	Sociology/ Criminal Justice	mwbradl@uark.edu	575-3205

3. Researcher(s) status. Check all that apply.

☐ Faculty ☐ Staff ☒ Graduate Student(s) ☐ Undergraduate Student(s)

4. Project type

☐ Faculty Research ☐ Staff Research ☒ Thesis / Dissertation ☐ M.A.T. Research ☐ Class Project ☐ Honors Project ☐ Independent Study / Educ. Spec. Project

5. Is the project receiving extramural funding? (Extramural funding is funding from an external research sponsor.)

☒ No ☐ Yes. Specify the source of funds

IRB Project Number

6. Brief description of the purpose of proposed research and all procedures involving people. Be specific. Use additional pages if needed. (**Do not** send thesis or dissertation proposals. Proposals for extramural funding must be submitted in full.)

Purpose of research: Conduct thesis for partial completion of MA in Sociology. I am using the National Corrections Reporting Program data (a publically available dataset) to examine the collateral consequences that the prison cycling process has on communities. I also use Census data, Religious Congregations and Membership Survey data, and Uniform Crime Report data – all publicly available data through ICPSR – to address this topic.

Procedures involving people: None

7. Estimated **number of participants** (complete all that apply): None – Secondary Data

_____ Children under 14 _____ Children 14-17 _____ UA students (18yrs and older) _____ Adult non-students

8. Anticipated dates for contact with participants: N/A

First Contact _____ Last Contact _____

9. Informed Consent procedures: The following information must be included in any procedure: identification of researcher, institutional affiliation and contact information; identification of Compliance Officer and contact information; purpose of the research, expected duration of the subject's participation; description of procedures; risks and/or benefits; how confidentiality will be ensured; that participation is voluntary and that refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled. See *Policies and Procedures Governing Research with Human Subjects*, section 5.0 Requirements for Consent.

☐ Signed informed consent will be obtained. **Attach copy of form.**
☐ Modified informed consent will be obtained. **Attach copy of form.**
☐ Other method (e.g., implied consent). **Please explain on attached sheet.**
☒ Not applicable to this project. **Please explain on attached sheet.**

10. Confidentiality of Data: All data collected that can be associated with a subject/respondent must remain confidential. Describe the methods to be used to ensure the confidentiality of data obtained.

All data used for this project is secondary data, meaning that I (the primary researcher) nor my faculty advisor have access to the names, addresses, or any other identifying information of those represented in the data.

11. Risks and/or Benefits:

Risks: Will participants in the research be exposed to more than minimal risk? F Yes F No Minimal risk is defined as risks of harm not greater, considering probability and magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests. Describe any such risks or discomforts associated with the study and precautions that will be taken to minimize them.

No

Benefits: Other than the contribution of new knowledge, describe the benefits of this research, especially any benefits to those participating.

The benefits entail a better understanding of the collateral consequences that the prison cycling process has on communities over time.

12. Check all of the following that apply to the proposed research. Supply the requested information below or on attached sheets: N/A

- ☐ A. Deception of or withholding information from participants. Justify the use of deception or the withholding of information. Describe the debriefing procedure: how and when will the subject be informed of the deception and/or the information withheld?
- ☐ B. Medical clearance necessary prior to participation. Describe the procedures and note the safety precautions to be taken.
- ☐ C. Samples (blood, tissue, etc.) from participants. Describe the procedures and note the safety precautions to be taken.
- ☐ D. Administration of substances (foods, drugs, etc.) to participants. Describe the procedures and note the safety precautions to be taken.
- ☐ E. Physical exercise or conditioning for subjects. Describe the procedures and note the safety precautions to be taken.
- ☐ F. Research involving children. How will informed consent from parents or legally authorized representatives as well as from subjects be obtained?
- ☐ G. Research involving pregnant women or fetuses. How will informed consent be obtained from both parents of the fetus?
- ☐ H. Research involving participants in institutions (cognitive impairments, prisoners, etc.). Specify agencies or institutions involved. Attach letters of approval. Letters must be on letterhead with original signature; electronic transmission is acceptable.
- ☐ I. Research approved by an IRB at another institution. Specify agencies or institutions involved. Attach letters of approval. Letters must be on letterhead with original signature; electronic transmission is acceptable.
- ☐ J. Research that must be approved by another institution or agency. Specify agencies or institutions involved. Attach letters of approval. Letters must be on letterhead with original signature; electronic transmission is acceptable.

13. Checklist for Attachments

The following are attached: N/A
☐ Consent form (if applicable) or
☐ Letter to participants, written instructions, and/or script of oral protocols indicating clearly the information in item #9.
☐ Letter(s) of approval from cooperating institution(s) and/or other IRB approvals (if applicable)
☒ Data collection instruments

14. Signatures

I/we agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects/respondents are protected. I/we will report any adverse reactions to the committee. Additions to or changes in research procedures after the project has been approved will be submitted to the committee for review. I/we agree to request renewal of approval for any project when subject/respondent contact continues more than one year.

Principal Researcher _____ Date

Co-Researcher _____ Date

Co-Researcher _____ Date

Co-Researcher _____ Date

Faculty Advisor _____ Date

PROTOCOL APPROVAL FORM

(To be returned to IRB Program Manager with copy of completed protocol form and attachments)

Human Subjects Committee Use Only (In absence of IRB-authorized Human Subjects Committee, send protocol to IRB.)

Recommended Review Status

9 Human Subjects Committee can approve as exempt because this research fits in the following category of research as described in section 9.02 of the IRB policies and procedures **(Cite reasons for exempt status.)**:

Printed Name and
Signature of the HSC Chair _____ Date

****

9 Expedited Review by a designated member of the IRB because this research fits in the following category of research as described in section 9.03 of the IRB policies and procedures **(Cite reasons for expedited status.)**:

Printed Name and
Signature of the HSC Chair _____ Date

****

9 Requires Full Review by the IRB because this research fits in the following category of research as described in section 9.04 of the IRB policies and procedures **(Cite reasons for full status.)**:

Printed Name and
Signature of the HSC Chair _____ Date

IRB/RSCP Use Only

Project Number _____ Received RSCP

Sent to: _____ Date:

Final Status

9 Approved as **Exempt** under section 9.02 of the IRB Policies and Procedures **(Cite reasons for exemption.)**:

9 Approved as **Expedited** under Section 9.03 of the IRB Policies and Procedures because **(Cite reasons for expedited status.)**

Printed Name and
Signature: _____ Date _____
IRB (for the Committee)

9 Approved by **Full** review under Section 9.04 of the IRB as meeting requirements of the IRB Policies and Procedures.

Printed Name and
Signature: _____ Date
IRB Chairperson

Data Collection Instruments: Location (URL) and identification of each dataset

Census Data:
http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t

National Corrections Reporting Program Data:
https://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/34555?q=NCRP&searchSource=icpsr-landing

Uniform Crime Report Arrest Data:
https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/57/studies/3173?dataFormat%5B0%5D=SPSS&q=uniform+crime+report+arrest+data+1999&searchSource=revise

https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/57/studies/3443?dataFormat%5B0%5D=SPSS&q=uniform+crime+report+arrest+data+2000&searchSource=revise

https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/57/studies/3760?dataFormat%5B0%5D=SPSS&q=uniform+crime+report+arrest+data+2001&searchSource=revise

https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/57/studies/30761?dataFormat%5B0%5D=SPSS&q=uniform+crime+report+arrest+data+2009&searchSource=revise

https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/57/studies/33521?dataFormat%5B0%5D=SPSS&q=uniform+crime+report+arrest+data+2010&searchSource=revise

https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/57/studies/34580?dataFormat%5B0%5D=SPSS&q=uniform+crime+report+arrest+data+2011&searchSource=revise

Religious Congregations and Membership Study Data:
http://www.thearda.com/Archive/Files/Descriptions/RCMSCY.asp

http://www.thearda.com/Archive/Files/Descriptions/RCMSCY10.asp