5-3-2016

Expanding Coercive Mobility Theory: Women's Forms of Capital and Neighborhood Social Control

Jaclyn Marie Cwick
University of Missouri-St. Louis, jmcwick2@gmail.com

EXPANDING COERCIVE MOBILITY THEORY:
WOMEN'S FORMS OF CAPITAL AND NEIGHBORHOOD SOCIAL CONTROL

Jaclyn M. Cwick
M.A. in Sociology with an emphasis in Criminology, August, 2010, Northern Illinois University
B.A. in Psychology, May, 2007, Eastern Illinois University

A Dissertation Submitted to The Graduate School at the University of Missouri-St. Louis
in partial fulfillment of the requirements for the degree
Doctor of Philosophy in Criminology and Criminal Justice

May 2016

Advisory Committee

Elaine Doherty, Ph.D.
Chairperson

Robert Bursik, Ph.D.

Stephanie DiPietro, Ph.D.

Beth Huebner, Ph.D.

James Lynch, Ph.D.

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ABSTRACT

This dissertation proposes a gendered theory of coercive mobility, synthesized from the collateral consequences of incarceration, along with coercive mobility theory and literature on forms of capital. Previous work has shown that the removal of residents due to mass incarceration contributes to disruptions in neighboring relationships and therefore, impedes the community's ability to prevent crime, commonly referred to as informal social control. This involuntary mobility due to prison admissions and returns, known as coercive mobility, has focused almost entirely on the collateral consequences to the incarcerated, a predominantly male population. However, those who remain in the community, primarily women, also experience disruptions to their neighboring relationships. This disruption leads to reductions in women's capital due to the incarceration of concentrated segments of male residents, including a reduction in social capital (e.g., resources that lie within these neighboring relationships), physical capital (e.g., income), and human capital (e.g., education). Therefore, women's capital is incorporated as a mechanism to more fully explain the process by which concentrated incarceration unfolds and results in reductions in neighborhood social control.

In addition to incorporating women's capital as a mechanism in the relationship between incarceration and informal social control, the proposed theory fills an evident gap in the literature by examining the consequences of incarceration for female residents, as well as the gendered or differential effects of incarceration to women and men. Using data on Baltimore residents, the dissertation tests the proposed theory by estimating the association between incarceration (prison admissions and releases) and women's and men's capital and social control at the neighborhood-level with the use of ordinary least squares regression models, and at the individual-level, while controlling for neighborhood characteristics, using hierarchical linear modeling. Furthermore, women's and men's capital are tested as mediators in the relationship between incarceration and social control at both levels. Findings provide support for a gendered theory of coercive mobility, advancing our understanding of the community consequences of incarceration to female residents, and offer suggestions for future research and policy implications.

CHAPTER ONE: INTRODUCTION

Modern trends in mass incarceration have produced levels of incarceration well beyond the "tipping points" expected to produce harmful effects (Rose and Clear, 1998). According to the Bureau of Justice Statistics (BJS), the criminal justice system presently supervises, jails, incarcerates, and paroles one in every 31 Americans (3.2% of the U.S. population) (BJS, 2012). This estimate provides an important picture of incarceration and supervision across the United States since this "nontrivial" prevalence speaks to the degree of impact to current and formally incarcerated individuals and their families (Brown and Manning, 2013). It does not, however, begin to provide an accurate picture of the story of how incarceration shapes larger community relationships, which also impact families and individuals.

Incarceration rates are not evenly distributed, but are stratified by residential location and highly concentrated among disadvantaged communities (Clear, 2007; Lynch, Sabol, Planty, and Shelley, 2002; Maurer, 1999; Petersilia, 2002; Rose and Clear, 1998). While the prevalence of adults under *recent* criminal justice supervision (i.e., on probation, in jail, or prison within the last 12 months) represents just 1.2% of adults (estimated by the national household Survey of Criminal Justice Experience (SCJE)) (Brown and Manning, 2013), national estimates of lifetime supervision reveal a much larger proportion of adults having ever been under criminal justice supervision, ranging from 10.2% (ages 18 and over; supervision measured as probation, jail, or prison) to 26.5% (ages 18-44; supervision measured as jail, prison, or juvenile detention center) (Brown and Manning, 2013). Furthermore, at the neighborhood-level these prevalence rates are unevenly distributed. While most neighborhoods have very low incarceration

rates, some neighborhoods experience an extreme concentration of incarceration, in which as much as 20% of adult men find themselves behind bars on any given day (Clear, 2007). In Brooklyn, for example, 11 city blocks make up 20% of the city's population, but contain 50% of the city's parolees (Petersilia, 2002). Similarly, 60% of prison admissions and releases come from and return to the Phoenix-Mesa area in Arizona and nearly 50% of prisons admissions in New Haven, Connecticut come from just three neighborhoods (Cadora and Swartz, 2006). Sections of Washington, DC, have an estimated one in five adult males behind bars (20%) (Clear, 2007) and neighborhoods in Cleveland, Ohio are missing up to 18% of the male population due to incarceration (Lynch and Sabol, 2001).

Concentrated rates of prison admissions and releases have also been documented within some neighborhoods within the states of New Jersey, Texas, and Louisiana (Cadora and Swartz, 2006) and the cites of Tallahassee, Florida (Clear, Rose, Waring, and Scully, 2003), Baltimore, Maryland (Lynch and Sabol, 2004a; 2004b; Lynch et al., 2002), and Wichita, Kansas (Cadora and Swartz, 2006). Furthermore, Lynch and Sabol (2001) estimate that the national reentry population to urban centers tripled between 1984 and 1996, growing from 11,000 to 330,000. The re-entry population, along with the impact of removal, is especially important to understand today since there is recent evidence that policy may be shifting– if even just slightly–towards decarceration strategies (see, for example, Gottschalk, 2014). Therefore, it is crucial to understand how communities are impacted by decades-long concentrated incarceration and release trends and what impact future release levels may have on communities.

Additionally, these estimates only represent a portion of the entire supervision story. Taking into consideration the proportion of men who are removed and cycle in and out of the correctional system over the course of a year causes estimates to expand exponentially, particularly in neighborhoods with the highest incarceration rates (Clear, 2007). For example, one in three 16–24 year olds in some neighborhoods in Brooklyn is sent to prison or jail each year (Cadora, 2001).The remaining neighborhoods are distributed widely in terms of the proportion of residents who are removed due to incarceration each year.

Communities with high incarceration rates are characterized by disadvantage, stratifying the consequences of incarceration among the nation's poor and undereducated minority groups (Lynch and Sabol, 2004a; 2004b; Rose and Clear, 1998; Western, 2007; Wildeman and Muller, 2012). The concentration of imprisonment is highly segregated among black and white neighborhoods. For example, in Brooklyn 12.4 per 1,000 individuals are incarcerated in primarily black neighborhoods, while imprisonment in primarily white neighborhoods occurs for only 2.7 per 1,000 residents (Clear, 2007).

Due to the confluence of incarceration in poor, minority communities, for "young black males in large urban centers ... imprisonment ... has come to be a regular predictable part of experience" (Garland, 2001: 2; Pettit and Western, 2004). Additionally, the high prevalence of prison has become a common life event that may rival such prevalent life events as college and military experience (Pettit and Western, 2004) or marriage and stable employment among black males (Doherty, Cwick, Green, and Ensminger, 2015).

The concentration of incarceration and overlap among indicators of disadvantage (percent of single-parent households, minority concentration, and individuals receiving government aid) can be clearly seen in Figure 1, depicting neighborhoods in Brooklyn. As shown, neighborhoods in which a large number of residents are admitted to jail and prison overlap with neighborhoods in which a large portion of residents receive TANF benefits, have large proportions of female headed households, and are largely comprised of black residents (Cadora, 2001).

[Figure 1 about here]

Therefore, the consequences of incarceration are concentrated among those who are already experiencing the impact of living within a disadvantaged neighborhood, including struggles such as poor schooling, high crime, drug use, gang activity, and poor and unsafe living conditions (Wildeman and Western, 2010). Due to the concentration of problems associated with living in a disadvantaged neighborhood it becomes a challenge, both substantively and methodologically, to distinguish among the effects of incarceration from pre-existing consequences of a disadvantaged lifestyle. The additional complexity of consequences caused from incarceration can be thought of as further "collateral damage" of living in a disadvantaged area (see Hagan and Dinovitzer, 1999). Citing literature on trauma and the life course (see, for example, Hagan and McCarthy, 1997a, 1997b), Hagan and Dinovizter (1999: 127) explain that "the imprisonment of a parent, [partner, or family member] represents one kind of event that can combine with other adverse life experiences in influencing longer-term life outcomes," leading to "a chain reaction" in which incarceration is "one 'bad' thing" leading to another in a series of other 'bad' things. In this way, incarceration will "more often compound than mitigate

preexisting family problems" and intensifies pre-existing neighborhood problems (Hagan and Dinovitzer, 1999: 125). Furthermore, incarceration policies and other social policies have impacted these communities in ways that have added to these damages, making them more high-risk, punitive, and unsafe (Hagan and Coleman, 2001; Hagan and Dinovitzer, 1999; Wacquant, 1998). Wacquant (1998: 26) argues, for example, that the "organizations presumed to provide civic goods and services—physical safety, legal protection, welfare, education, housing, health care—which have turned into instruments of surveillance, suspicion and exclusion rather than vehicles of social integration and trust building" are adding to the problems that they intend to fix.

The disadvantaged circumstances that residents find themselves in prior to their own incarceration or the incarceration of a family member raises an important point regarding the "multi-functionality" of the consequences of incarceration, particularly with respect to criminality and victimization (Comfort, 2008). At the individual-level, incarceration has the potential to elicit positive effects in addition to the elimination of the offender's criminal activity. For example, removing an offender may contribute to a reduction in the offending or victimization experiences of their family members and friends (i.e., a woman's victimization experiences may decline if her partner was a contributor to abuse). The multi-functionality of consequences is highest at the individual and familial-levels. Individual scenarios are often complex and therefore, families and friends may experience both positive and negative consequences following the incarceration of a family member or friend. However, scholars conclude that the consequences of incarceration are generally harmful for most inmates, marriages, and families in consideration of the big picture or generalization of effects (Carlson and

Cervera, 1992; Comfort, 2008; Fishman, 1990; Hagan and Dinovitzer, 1999), particularly when a male offender is removed (Wakefield and Wildeman, 2014). In the aggregate, deleterious consequences greatly outweigh positive ones, particularly when incarceration is concentrated within a community. As Clear (2002: 193) states:

> "There are of course families that rally in the face of a loved one being sent to prison finding ways to strengthen child-rearing and locating substitute resources to replace the lost family member. There are plenty of families, too, that benefit from the temporary reprieve from what may well have been a damaging member of the household… Yet, these stories are the exception rather than the rule. On average, the effects of very high levels of incarceration are destabilizing in the aggregate, and they pose a problem even the strongest families must struggle to deal with. Too many families and too many neighborhoods fail the challenge."

Coercive mobility theory argues that an overreliance on formal social control, namely incarceration, can result in deleterious consequences to the social structure, and a subsequent weakening of *informal social control*, referring to the community's ability to react to and prevent crime (Bursik and Grasmik, 1993), at the neighborhood-level (Rose and Clear, 1998). According to the theory, neighborhood reductions in informal social control occur through consequences to the social capital of the incarcerated, who are predominantly men. *Social capital* refers to the set of resources that lie within neighbor relations (Coleman, 1990). However, those who remain in the community, primarily women, also experience reductions in capital (i.e., physical, human, and social) due to periods of incarceration of male family members and friends, as well as the incarceration of concentrated segments of male residents (Wakefield and Wildeman, 2014; Wilson, 1987). This dissertation presents and tests a theoretical expansion of the theory of coercive mobility, which incorporates women's capital as an additional mechanism to more fully explain the relationship between incarceration and neighborhood crime through informal social control, as well as formal social control. The proposed *gendered*

theory of coercive mobility is extended from coercive mobility theory and the extensive body of literature surrounding the collateral consequences of incarceration to women who remain in the community.

COERCIVE MOBILITY THEORY

Rose and Clear's (1998) theory of coercive mobility is developed from a social disorganization framework and incorporates the effects of incarceration on neighborhood crime. The social disorganization framework posits that neighborhood structural characteristics, including residential instability, poverty, and racial and ethnic heterogeneity (Shaw and McKay, 1942), contribute to neighborhood "disorganization" or the failure of a community "to realize the common values of their residents or solve commonly experienced problems" (Bursik, 1988: 521; see also Thomas and Znaniecki, 1920). The systemic reformation of social disorganization (e.g., the systemic model) further develops these processes, explaining that disruptions to systemic networks (e.g., neighboring relations) interfere with residents' ability to police themselves and effectively reduce crime (i.e., informal social control) (Bursik and Grasmik, 1993).

Residential instability disrupts systemic networks by making it difficult for residents to maintain relationships (Bursik and Grasmik, 1993). Similarly, poverty interferes with residents' ability to socialize and supervise young children and teens while racial and ethnic heterogeneity impedes resident cohesion due to divergent norms and traditions. Consequently, both poverty and racial and ethnic heterogeneity lead to disruptions in network relations (Bursik and Grasmik, 1993). Without strong systemic networks in place, informal social control efforts are inhibited (Bursik and Grasmik, 1993).

Figure 2 (adapted from Rose and Clear, 1998) illustrates the relationships within coercive mobility theory. A "feedback loop" is extended from the *level of incarceration* back to the disorganizing *neighborhood structural characteristics* posited by social disorganization theory (e.g., residential instability, poverty, and heterogeneity) (Bursik and Grasmik, 1993).

[Figure 2 about here]

The level of incarceration also leads to reductions in *physical*, *human,* and *social capital.* Physical capital refers to the tangible resources belonging to an individual, including money, possessions, and other assets (Coleman, 1990),[1] while human capital refers to the skills and resources of individuals (Coleman, 1990). The term "social capital" has a long history in sociology dating back to the mid-19th century (Portes, 1998). Ironically, scholars' frequent attempts to clarify the term have resulted in further confusion surrounding the range of processes and constructs to be included (see Portes, 1998). Coleman's (1990) definition is clear in its distinction of social capital from other types of capital (physical and human) and is the definition adopted by coercive mobility theory (Rose and Clear, 1998). Coleman (1990) emphasizes social capital as a product of relations among people. It is not in itself a tangible resource, but represents the potential to acquire resources from one's connections and interactions with others. In line with the systemic model, Coleman views dense systemic networks as a necessary condition for the emergence of social capital (1990; Portes, 1998). Similarly, Rose and Clear (1998: 454) describe social capital as "the *social* skills and resources needed to affect positive change in neighborhood life." Although social capital is the least tangible form of all capital

[1]Physical capital, although not explicitly described by coercive mobility scholars, has been defined within the primary literature encompassing social capital (Coleman, 1990; Putman, 1993).

since it refers only to the potential for resources that lie within one's connections with others (Coleman, 1990), more tangible forms of capital are related to one's social capital since those with more resources and skills to exchange are more likely to be sought out for relationships by others. Likewise, those with more resource-inherent connections are more likely to acquire more tangible forms of capital through those networks.

The theory posits that *coercive mobility*, referring to the cycling of residents into and out of the neighborhood due to prison entry and community reentry (Clear et al., 2003), directly contributes to residential instability since the displacement of a large portion of residents creates holes in the structure of systemic networks and weakens their ability to facilitate informal social control (Rose and Clear, 1998). Coercive mobility also indirectly contributes to further residential instability and poverty since highly incarcerated neighborhoods develop poor reputations and high rates of crime (due to reductions in informal social control) so that residents who can afford to move choose to relocate, leaving behind the most disadvantaged residents (see Burgess, 1925; Rose and Clear, 1998). Further, although coercive mobility does not directly contribute to racial and ethnic heterogeneity, it may indirectly impact segregation through effects to poverty, subsequently leading to specific groups remaining in the neighborhood while others are able to move out since poverty and race and ethnicity are highly correlated. Coercive mobility also contributes to the heterogeneity of cultural norms due to the introduction of the prison subculture from the constant flux of incarcerated residents back into the community (Rose and Clear, 1998). Effects to norm heterogeneity are just as important if not more important for informal social control as racial and ethnic heterogeneity since racial and ethnic heterogeneity is thought to impede informal social control through its

disruption of neighbor cohesion due to residents' divergent backgrounds and cultural norms (Bursik and Grasmik, 1993). Former offenders return to the community with a stronger deviant orientation, having been exposed and desensitized to criminal attitudes while incarcerated, contributing to a breakdown of cohesive attitudes and informal social control (Lerman, 2013; Rose and Clear, 1998). Lerman (2013: 162; 166) suggests that the "hostile or aggressive attitudes" and "types of social ties that are formed and maintained in America's more violent and punitive prisons…are also broadly characteristic of the communities to which ex-prisoners predominantly return." She argues that the social attitudes formed in prison leave with the inmates who adopt them, reducing law-abiding attitudes within the communities to which they return (Lerman, 2013: 166).

Coercive mobility theory specifies that neighborhood structure leads to reductions in the effectiveness of informal social control through diminished human (e.g., skills and abilities) and social capital (Rose and Clear, 1998). Thus, within Figure 2, *human and social capital* mediates the relationship between *neighborhood structure* and *informal social control*, which in turn is associated with levels of neighborhood *crime* and *incarceration* (Bursik and Grasmik, 1993; Rose and Clear, 1998).

EMPIRICAL EVIDENCE FOR COERCIVE MOBILITY THEORY

According to coercive mobility theory, incarceration in small doses contributes to a reduction in crime as intended, but produces harmful "feedback" effects once a "tipping point" in the level of incarceration has been reached (Clear et al., 2003; Renauer, Cunningham, Feyerherm, O'Connor, and Bellatty, 2006; Waring, Clear, and Scully, 2005). An empirical test by Clear and colleagues (2003) examined the relationship between neighborhood-level incarceration and crime rates one year later among a sample

of Tallahassee neighborhoods. They found that prison releases contributed to increased crime rates one year later. Furthermore, a "tipping point" was found in which high rates of prison admissions were associated with higher crime rates the following year. On the other hand, Lynch and Sabol (2004b) found that increasing admission rates (measured as a five-year change in rates) were associated with decreased crime in a sample of Baltimore neighborhoods when they added drug arrest rates as an instrumental variable, allowing them to isolate causal ordering.

Lynch and Sabol (2004b) further tested the effects of incarceration on elements of community-level social control, using aggregate measures combining both men's and women's survey responses. They found that increasing changes in admission rates lead to decreased feelings of community solidarity, as well as marginally increased participation in informal social control, although the latter of the two effects was much smaller than the former. These results are counter-intuitive since decreases in community solidarity would be in contrast to the formation of informal social control (Lynch and Sabol, 2004b). One explanation for these seemingly counter-intuitive findings is that the effect of incarceration may vary for men and women, causing these findings to diverge and concealing a more complicated story within the community-level results.

A similar story is found within extant literature examining individual-level outcomes. A recent study by Lerman (2013) found that prison release rates are associated with an increase in individual residents' frequency of informal socializing with friends and relatives, but a decrease in their trust and community cooperation. Again, these findings are somewhat counterintuitive and although gender may offer one plausible explanation for these divergent findings, there is no inclusion of separate estimates for

men and women (or a comparison of the two). Also, it is worth noting that "cooperation" in Lerman's (2013) study is admittedly an "imperfect measure," which gauges the likelihood that residents would cooperate to conserve water or electricity in a state of emergency and not residents' cooperation to prevent crime.

Although coercive mobility theory provides an important area of research to investigate, there is very little data available that allows for direct empirical testing of all of its components. As a result, the studies surrounding incarceration and its effects are rare and those that do exist are not without their limitations. Notably, the causal ordering of variables is difficult to distinguish, as with all cross-sectional research, but particularly with research that attempts to distinguish among a number of potential confounding effects, such as the characteristics of disadvantaged context coupled with incarceration. As the 2014 National Academies Press (NAP) Report on "The Growth of Incarceration in the United States" concludes:

> "A major problem is that incarceration at the neighborhood level is entangled with a large number of preexisting social disadvantages, especially the concentration of high levels of poverty and violence" (2014: 282).

This confounding of disadvantaged factors, all of which could contribute to outcomes posited to be associated with incarceration, can clearly be seen in Figure 1. Despite this hardship, the NAP report concedes that there is an "importance of undertaking a rigorous, extensive research program to examine incarceration's effects at the community level" (2014: 298) since "the intense concentration of incarceration added to existing social inequalities constitutes a severe hardship faced by a small subset of neighborhoods" (2014: 282).

In sum, coercive mobility contributes to further neighborhood-level disadvantage and social problems in communities with high rates of incarceration by reducing both individual and community social capital. Rose and Clear (1998) and others (Clear, 1996; Lynch and Sabol, 2004a; 2004b; 1992; Moore, 1996; Nightingale and Watts, 1996; Renauer et al., 2006; Waring, Clear, and Scully, 2005) infer from the extant literature that high rates of incarceration contribute to increased crime through reductions to incarcerated *men's* social capital and a weakening of family and community networks capable of enacting informal social control. However, the extant work has not fully tested these relationships. Previous work has not attempted to isolate the individual and community effects of incarceration separately for men and women, nor has it attempted to determine if impacts to men and women are significantly gendered (i.e., significantly different from one another). More importantly, coercive mobility theory has neglected to theoretically assess the effects of men's incarceration on *women's* capital and has ignored how women's capital may produce gendered effects to community informal social control and crime. These evident gaps in the research are particularly troubling given that the potential uniqueness of men's and women's responses to incarceration is one plausible explanation for the divergent findings of extant work. The proposed project moves the field forward by examining these evident gaps in the research both theoretically and empirically.

COERCIVE MOBILITY THEORY AND WOMEN

Some collateral consequences of incarceration to women who remain in the community (see Carlson and Cervera, 1992; Comfort, 2008; Fishman, 1990; Wakefield and Wildeman, 2014), as well as consequences specifically relating to women's and

children's capital have been documented in extant literature (see for example Hagan and Dinovitzer, 1999), mainly with the use of in-depth qualitative studies. However, there remains much to be learned about the community consequences of incarceration and consequences particularly to residents who are not involved with the criminal justice system themselves. In addition, these issues have yet to be synthesized into one thesis that demonstrates how each form of capital influences others. Additionally, work in this area has not demonstrated how these effects build to impact the community and its ability to facilitate informal social control and reduce crime. Similarly, although coercive mobility theory has well-articulated consequences to the social capital of returning men, resulting in deleterious community consequences, this body of work has neglected to include how consequences to women's capital also build to result in unique family and subsequent community consequences. Finally, the consequences of incarceration to both men and women have not been examined in relation to one another in order to determine whether they represent distinctly gendered responses or processes.

The dissertation is organized into seven chapters. Chapter One, introduced the problem, as well as the basic theoretical components and empirical evidence surrounding coercive mobility theory in the literature thus far. Chapter Two synthesizes literature on the collateral consequences of incarceration, coercive mobility theory, and forms of capital in order to theoretically describe the processes whereby incarceration results in consequences to women's capital and neighborhood-level consequences essential for social control and crime reduction. This chapter incorporates women into coercive mobility theory, elaborating on how each form of women's capital and social control is affected within these processes. This chapter also theorizes regarding how incarceration

may be associated with unique consequences to women's capital and social control compared to men, lending itself towards a revised and expanded *gendered theory of coercive mobility*. In Chapter Three, the data and measures are detailed. Chapter Four describes the proposed analytic strategies of ordinary least squares (OLS) regression to estimate outcomes at the neighborhood-level and hierarchical linear models (HLM) to estimate outcomes at the individual-level, while controlling for neighborhood-level characteristics. Chapters Five and Six present the study's findings for the impacts of incarceration on women's and men's forms of capital and social control at the neighborhood and individual-level, respectively. Lastly, Chapter Seven concludes with a discussion of the study's findings, limitations, and suggestions for future research and policy implications.

CHAPTER TWO: THEORETICAL DEVELOPMENT

COLLATERAL CONSEQUENCES TO WOMEN IN THE COMMUNITY

Neglecting the segment of women who are indirectly affected by incarceration, through the incarceration of men in the community, ignores the largest portion of women who are affected by the criminal justice system. Incarceration is highly concentrated among men, comprising 93% of the U.S. prison population (Harrison and Beck, 2006). Therefore, although the study of female inmates is an emergent and essential field in criminology and criminal justice, it captures a less common segment of women affected by the system.

It is estimated that 107,518 women are state and federal inmates, a figure that is growing much faster than the rate of incarcerated men (4.6% versus 3.0%) (Harrison and Beck, 2006). However, the most conservative estimates for the number of women who are affected by incarceration through the incarceration of a marriage partner (approximately 278,000) are still more than double the estimated proportion of women who are incarcerated themselves (BJS, 1997). Including women who are in a heterosexual relationship with a currently incarcerated partner increases this estimate to 695,000 women (Carlson and Cervera, 1992; Grinstead, Zack, Faigeles, Grossman, Blea, 1999; Jorgensen, Hernandez, and Warren, 1986). In her pivotal work, *Doing Time Together,* Comfort (2008) emphasizes that after expanding this figure to include the 13 million men that pass through the jail and prison system each year, approximately 6.5 *million* women are estimated to experience the removal of a partner annually (based on 50% of incarcerated men reporting being in heterosexual relationships). Since men are incarcerated at a rate of almost thirteen times that of women (Comfort, 2008), the number

of women affected by the incarceration of a male partner, family member, friend, or neighbor surpasses that of men experiencing the incarceration of a female loved one.

Although the consequences of male removal due to incarceration can be both harmful and beneficial, they are more likely to result in harmful consequences to those left behind. In general, the effects of the removal of male offenders are more harmful due to the fact that the pool of incarcerated men includes a greater portion of "low-risk" and non-violent offenders compared to the pool of female offenders (Wakefield and Wildeman, 2014). As Todd Clear argues, "the idea that removing criminals has primarily the effect of eliminating community deficits comports closely with dominant public opinion about criminals: they are viewed as people whose net contribution to community life is negative, and so not much will be lost by their being gone" (2002: 181). However, the criminal justice policy changes that have led to mass incarceration have put away men who are far more complex than this black and white depiction and who represent more "socially integrated offenders" than in the past (Lynch and Sabol, 1997: 5), which may be especially true for male offenders. Furthermore, Wildeman and Western (2010: 163) argue that "as the imprisonment rate has grown, prisoners have come to resemble more closely the general population" in terms of their social and familial contributions, adding that although they may contribute to more crime than the average person in the population their removal has negative consequences none the less. And so, much of the literature concludes that these men do make positive contributions to their families, friends, and neighbors, despite their participation in illegal activities, and therefore, their removal results in an array of negative consequences to the individuals they leave behind, as well as to the neighborhood as a whole.

Wakefield and Wildeman (2014) summarize findings on maternal and paternal incarceration, noting that the effects of paternal incarceration are consistently in the direction of harm, while maternal incarceration produces greater variation in consequences. They find that "the effects of maternal incarceration…are dwarfed by existing disadvantages before incarceration," resulting in less dramatic and even positive impacts to children following a "high-risk" mother's removal (Wakefield and Wildeman, 2014: 73). This argument extends beyond the consequences to children of the incarcerated. Although many criminal men's removal may result in positive consequences to their families and communities, the removal of "low-risk" men who make many prosocial contributions to their families and community means that their removal is likely to have damaging effects to their partners, families, and communities.

Therefore, it is critical to understand how women are impacted by the incarceration of male residents. Furthermore, women's indirect experiences with incarceration are likely to be much different from men's experiences, resulting in specific individual and subsequent neighborhood-level consequences (see Clarson and Cervera, 1992; Comfort, 2008; Wakefield and Wildeman, 2014). For example, the additional challenges that women face in the job market and responsibilities as traditional primary caregivers to their children, with whom they often reside, adds to women's struggle of living within high incarceration neighborhoods compared to men. Women are likely to experience greater reductions to their physical, human, and social capital compared to men, contributing to deleterious consequences for neighborhoods with high incarceration rates. Therefore, it is necessary to develop a gendered theory of coercive mobility,

demonstrating how these relationships unfold separately for men and women at both the individual and neighborhood-level.

EXPANDING COERCIVE MOBIILTY: A GENDERED EXPERIENCE

Figure 3 summarizes the relationships present in the proposed gendered theory of coercive mobility. Within the figure, consequences to *women's capital* (and *men's capital*), are the result of *neighborhood structure*, as well as the *level of incarceration.* Additionally, *women's physical and human capital* (as well as men's capital) is connected to their *social capital* and the social capital of their families, which subsequently affects *women's aggregate social capital*. Incarceration is predicted to be associated with separate and unique effects to women's capital and social control compared to men. Finally, women's aggregate social capital and the social capital of the community "feedback" onto individual residents (through impacts to informal social control, crime, and incarceration), producing indirect individual-level consequences to those who reside in high incarceration communities, regardless of their association with incarcerated residents. Also, because it has been suggested that *women's social capital* may be more effective for *informal social control* compared to men's (see Rountree and Warner, 1999) this relationship has particular importance for community rates of *crime* and *incarceration*. The following sections elaborate on each of these stages independently, although a large degree of overlap exists between each stage.

[Figure 3 about here]

INDIVIDUAL-LEVEL CONSEQUENCES OF COERCIVE MOBILITY

Individual-level consequences of incarceration occur to women who share a relationship with the incarcerated (e.g., wives, girlfriends, partners, family members), as

well as those who simply reside in the neighborhood, regardless of their association with any specific incarcerated individual. Although, the proposed theory extends to all women in neighborhoods with high rates of incarceration, the foundational literature is drawn from research that focuses on that of the wife, girlfriend, or partner, since these groups have been examined most thoroughly. Furthermore, wives, partners, and girlfriends likely experience the greatest impact while other related kin (i.e., mothers, grandmothers, sisters, daughters, aunts, etc.) and friends (i.e., neighbors) are likely to experience similar impacts of incarceration relative to the closeness of their relationship with the incarcerated and in proportion to their reliance on them and others' connections to them.[2]

Women's Physical and Human Capital

Incarceration (Figure 3, box 9) contributes to further disadvantage and declining community characteristics (Figure 3, box 2), which in turn, depletes the physical and human capital of women who reside within the community (Figure 3, box 2). Overall, consequences to women's physical capital occur in the form of income loss, while losses to human capital may occur through education and career stagnation. Additionally, women are more likely to experience declines in health and well-being and encounter changes in crime and victimization experiences, contributing to further declines in human capital (see Figure 3, box 2).

[2]Grandmothers are often impacted heavily by the incarceration of a child (Hanlon, Carswell, and Rose, 2007; Bloom and Steinhart, 1993). However, the grandmother's role as a central caregiver takes place more often during a mother's incarceration compared to a fathers' due to the living circumstances of the affected children (Porterfield, Dressel, and Barnhill, 2000).Approximately 90% of children stay within the care of their mother during a father's incarceration, while 50% of children are placed with grandmothers during a mother's incarceration (25% live with their father, 15% stay with friends or family, and 10% are placed in foster care) (Porterfield, Dressel, and Barnhill, 2000).

Physical Capital: Income Loss

To begin, women who experience the temporary loss of a partner or loved one to incarceration deal with much uncertainty and instability. A partners' removal may contribute to a reduction in physical capital, or capital in its most tangible form, including assets, resources, materials, and tools (Coleman, 1990). Income loss is a major difficultly reported by female partners of male prisoners (Braman, 2004; Carlson and Cervera, 1992; Fishman, 1990; Morris, 1965; Murray, 2005; Nurse, 2002; Schneller, 1975; Wakefield and Wildeman, 2014). In addition, women report dealing with financial challenges, such as finding affordable childcare, locating affordable housing, looking for work, and struggling to ask for emotional and financial support from family members, following the incarceration of a partner (Braman, 2004; Murray, 2005; Wakefield and Wildeman, 2014).

In general, women are likely to experience greater income loss due to the incarceration of a male partner compared to men experiencing the loss of a female partner given the gender gap in earnings (Braman, 2003; Carlson and Cervera, 1992; Wakefield and Wildeman, 2014). However, this is more likely the case for couples of median or high income. According to the work of Kathryn Edin and others (Edin, 2000; Tach and Edin, 2011; Tach, Mincy, and Edin, 2010), couples within disadvantaged communities often feature women acting as main providers with more economic control compared to the male partner. Unmarried male partners, in particular, are likely to supplement their girlfriend's income while they reside at the home that she rents or owns (Edin, 2000). Overall, women residing in disadvantaged communities are less likely to marry compared to other women (Edin, 2000; Tach and Edin, 2011; Wilson, 1987) and often maintain

their single status or end relationships due to the lack of job and income stability that men in these communities with high-unemployment rates contribute (Edin, 2000). Therefore, the certainty of income loss for women living in disadvantaged communities following the incarceration of a male partner is less consistent compared to other women and their reliance on their partner's income, which may already be anticipated as unstable, may be minimal. However, married men and men who have maintained long-term partnerships within these disadvantaged communities tend to be men who have provided more stable support (monetary and emotional) over the course of the relationship (Comfort, 2008; Edin, 2000; Tach and Edin, 2011). Therefore, it's likely that the men who women are willing to remain with throughout a period of incarceration (or at least the beginning of a period of incarceration) were contributors to household income, acted as supportive parents or partners, or assisted in some way.

In addition, research shows that many individuals who are involved in criminality are also assets to their families and communities. Ethnographic work shows that many active gang members are also fathers who hold legitimate, although often sporadic, jobs (Decker, 1996; Venkatesh, 1997). Male street-level drug dealers (MacCoun and Reuter, 1992) and young offenders (Clines, 1992; Sullivan, 1989; Wakefield and Wildeman, 2014) contribute to their families through legitimate sources of income. Offenders provide monetary support, in addition to resources and networks of extended family and associates (i.e., social capital) (Browning, 2009; McCall, 1994; Pattillo, 1998; Shakur, 1993) that is unexpectedly and abruptly removed when they experience a period of incarceration. Overall, the portrait of offenders as 'all bad' ignores their presence as positive contributors and even agents of informal social control, especially "low-risk"

offenders (Comfort, 2008; Rose and Clear, 1998), and distorts a much more complex understanding of offender networks and contributions.

Furthermore, regardless of the man's financial contribution before incarceration, the associated costs of incarceration itself are often at the expense of their partners and family members. Legal costs before, during, and after incarceration can cause a major burden for the partners and families of the incarcerated (Christian, 2005; Comfort, 2008; Fishman, 1990). In addition, costs of staying in contact may include traveling to the prison for visits, expensive phone calls, stamps, and email subscription fees. Families also often contribute to prisoners' commissary accounts so that they may purchase necessities, such as toothpaste, and other personal hygiene items, that are not always supplied, as well as other items they made need (i.e., special dietary items) (Comfort, 2008; Christian, 2005).

Following incarceration and often for the rest of their lives, men's incomes are substantially reduced once they return to their families. A study using the Fragile Families and Child Well-being Study (FFCWS), which followed a cohort of mostly disadvantaged children born to unmarried parents in the late 1990's, found that previously incarcerated men were 14% less likely to contribute to their families with small children and those who did contribute provided an average of $1,400 less per year compared to similar men with no history of incarceration (Geller, Garfinkel, and Western, 2011). Therefore, losses to physical capital are a major difficultly reported by women with incarcerated partners and one that lasts indefinitely.

Human Capital: Education and Career Stagnation

Reductions in income also contribute to subsequent losses in women's human capital, which refers to the "personal resources an individual brings to the social and economic marketplace" (Travis and Visher, 2005: 186). This includes education, job training, talents and skills, such as parenting, financial knowledge, or any abilities and qualities that exist within a person that they can draw upon, without requiring connections to a network (as social capital demands).

The incarceration of a partner reduces opportunities for women to develop potential human capital through work and educational pursuits (Braman, 2004; Edin and Jencks, 1990; Hagan and Dinovitzer, 1999). Although sometimes unstable (see Edin, 2000), the absence of men's contributions to the family and household, including income, childcare assistance, and emotional support, makes it more difficult for women to pursue options towards long-term career growth, such as higher education and vocational school while their partner is incarcerated. The need for immediate income or additional childcare costs to replace the losses that their partner's incarceration created often means they must sacrifice time and investments for upward mobility in order to work jobs that they are qualified for and that are open immediately, usually meaning low-paying or temporary positions. The skill set acquired from working in the minimum wage job sector is unlikely to develop into potential physical or human capital capable of investment into future career opportunities for upward mobility (Ehrenreich, 2010; Edin and Jencks, 1990), hindering women's long-term career prospects even after their partners return. The luxury of investing time and preparation into selecting a job or career is even less probable in disadvantaged communities due to high rates of unemployment and the

scarcity of available jobs (Wilson, 1987). Given these circumstances, the job market is likely to be less desirable and even more limited for women, often entering the workforce with less experience, potential earning power, and more stringent expectations for fulfilling childcare responsibilities (AAUW, 2014). Also, since women generally require more human capital in the form of education in order to achieve the same pay as men with less formal education (AAUW, 2014), the incarceration of a male partner may be more detrimental in determining women's career prospects compared to men who experience the incarceration of a female partner. Overall, women's potential lifetime physical and human capital is cut short due to periods of incarceration that are not their own.

Human Capital: Health and Well-being

An individual's health and well-being impacts the human capital that they possess. Anxious or depressive symptoms restrict an individual's skill set, depleting job and school performance, as well as inhibiting effective childcare. Compared to men, women commonly suffer psychological symptoms, including anxiety and depression following negative local network events, such as the death of a family member or divorce (Conger, Lorenz, Elder, Simons, and Ge, 1993; Maciejewski, Prigerson, and Mazure, 2001; Meadows, McLanahan, and Brooks-Gunn, 2008; Thoits, 1987). A study by Maciejewski and colleagues (2001) found that women are approximately three times more likely than men to experience major depression in response to any stressful life event, including the death of a child or spouse, the death of a friend or family member, divorce, and financial or legal trouble.

Wildeman, Schnittker, and Turney (2012) recently investigated whether the same was true of women experiencing the incarceration of a partner. They found that a partner's incarceration increased a woman's risk for a major depressive episode and her level of life dissatisfaction, while controlling for prior mental health and even among women who were partnered to men who were incarcerated prior to the most recent period under study. More specifically, they found that the odds of being depressed are 54% higher for mothers who had a child with a recently incarcerated man compared to women who had a child with a man not recently incarcerated. They also found that changes in economic well-being and parenting stress and experiences were primary mechanisms linking the partner's incarceration to women's depression (Wildeman, Schnittker, and Turney, 2012). Furthermore, the body of ethnographic research in this area suggests that women experience high emotional and social costs of a partner's incarceration that often leads to depression (Braman, 2004; Comfort, 2008; Wildeman and Western, 2010). Therefore, when women experience a loss within their local networks, they often react with internalizing symptoms that likely reduce their engagement within those networks, contributing to a withdrawal from social contacts (affecting social capital in addition to human capital) (Carlson and Cervera, 1992; Morris, 1965; Rosenfeld, Rosenstein, and Raab, 1973).

Human Capital: Experiences with Crime and Victimization

Women's criminality may increase or decrease following the incarceration of their partner. Scholars find that women offenders often engage in relationships that facilitate their criminal behavior (Robertson and Murachver, 2007; Van Voorhis, Wright, Salisbury, and Bauman, 2010). Therefore, women's criminal activity may cease or

decrease upon the removal of their partner, increasing their human capital through a lessened criminal record or opportunities to build conventional skill sets in the absence of criminal behavior. However, women may also find themselves participating in more crime following their partner's removal since they may be free to deviate in their partners' absence or since they may view illegal activity as a route to securing additional physical capital. Limited opportunities for legitimate work in these settings may contribute to a reduced stake in conformity and an increased likelihood for criminal activity (Crutchfield and Pitchford, 1997), further complicating the cycle of incarceration and disadvantage. Furthermore, women's criminal activity can also lead to their own incarceration, complicating the story of parent removal, return, and overall deterioration of systemic networks.

The absence of males in the community can also be felt in terms of a lack of protection or guardianship, contributing to an increase in violent and property victimization, as well as a decrease in the human capital of remaining women. Removal from the home may reduce the protection these residents have provided in terms of the time spent at the home, acting as a physical presence or surveillance, as well as protection provided through connections to other residents (both sources of social capital). Therefore, their removal may have consequences mainly related to property, but also violent victimization. In the case where the incarcerated was contributing to their partners' victimization, in the form of domestic abuse, the effects of their removal are much more complex. Here, direct victimization to their partner would be eliminated, but this could also potentially open up the home to vandalism, burglary, or other crimes from outside sources. The view of the incarcerated here is again complex, acting as both a

capable guardian and a motivated offender, to put it in the language of routine activities theory (Felson and Cohen, 1980), but this image coincides with the complex, reformed depiction of offenders as "socially integrated" contributors to family and community life (Clear, 2002; Lynch and Sabol, 1997; Wakefield and Wildeman, 2014; Wildeman and Western, 2010).

In addition, direct and indirect experiences (perceived from others' encounters, media, or neighborhood cues, such as disorder) with crime and victimization are likely to contribute to fear of crime and perceptions that the neighborhood is unsafe, resulting in a decline in overall mental health and well-being (Adams and Serpe, 2000; Box, Hale, and Andrews, 1988; Brown and Polk, 1996; Fisher and Nasar, 1992; Skogan, 1986; Skogan and Maxfield, 1981) or restricted human capital, as well as withdrawal from relationships (having additional consequences for social capital).

Women's Social Capital

Consequences to women's physical and human capital spill over to affect hers, as well as the entire family's social capital, referring to the relationships that foster the potential exchange of tangible capital (Coleman, 1990). Overall, the removal of a male partner or father creates greater burdens and more dramatic effects to the remaining home environment, often resulting in parenting struggles and relationship or marriage dissolution. Coercive mobility's effects to family relationships and dissolution are thought of as contributing to social capital since by definition they involve a dyadic relationship at the very least, which likely extends to larger relative and friendship networks (see Figure 3, box 2).

Parenting

It is estimated that over 990,000 jail and prison inmates in the U.S. are fathers (Comfort, 2007; Parke and Clarke-Stewart, 2003) and conservative estimates show that the number of children (those 18 and under) who have a father in prison (not including those with a father in jail) is over one and a half million (1,559,200) (147,400 children are estimated to have a mother in prison) (BJS, 2010; see also Western, Lopoo, and McLanahan, 2004). Wildeman (2009) finds that racial and class inequality is also present in the risk of children experiencing parental incarceration. For example, over 50% (50.5%) of black children born in 1990 whose parents were high school dropouts were expected to have an incarcerated father by age 14 compared to 7.2% of their white counterparts (Wildeman, 2009). The patterns for children of incarcerated fathers are presumably concentrated by residential location, given the concentration of incarceration more generally. Therefore, considerable overlap exists among the concentration of child and young adult socialization in the absence of a stable father and the contexts of incarceration and disadvantage, adding to the difficulty of overcoming "feedback" effects in these neighborhoods.

Exacerbated Consequences of Coercive Mobility for Mothers

Effects of incarceration to children and children's social capital are particularly important for women since women are more often residentially tied to their children and traditionally fill the role of primary care-giver compared to men. More incarcerated mothers report living with their children prior to their incarceration (64.5%) compared to incarcerated fathers (46.5%) (BJS, 2010) and mothers are more likely to be the sole live-in parent compared to men (Wakefield and Wildeman, 2014). As a result, children are

more likely to move to the homes of extended family or be placed in child services when their mother is incarcerated (Comfort, 2008; Fishman, 1990). Therefore, a mother's incarceration has the potential to completely erase and renew the living situation of her children, contributing to drastic changes in the *child's* home environment and sources of social capital. On the other hand, a father's removal usually means that he is simply removed from the existing home environment, contributing to more drastic losses to the *mother's* social capital through additional financial burdens (e.g., childcare and living expenses) and parenting struggles (e.g, discipline, supervision) compared to fathers in the same situation.

A father's absence contributes to reductions in social capital, directly by experiencing his absence and indirectly, by losing the potential resources that his connections may have brought to the family. Recall that these men contribute a multitude of resources and relations to the family and family structure, despite their offending histories (Browning, 2009). Additionally, Wakefield and Wildeman (2014) report a wide range of parental involvement prior to incarceration (see also Braman, 2004). They find that many incarcerated fathers are viewed as "good fathers" who contributed time and emotional support, both forms of social capital, to their partners and children (Smith and Clear, 1997; Wakefield and Wildeman, 2014). Research directly related to criminality and fatherhood suggests a nuanced depiction in which criminality is both viewed as incompatible with fatherhood and discouraged by mothers (Hembry, 1988; Sullivan, 1992), while others see their child's needs as a motivation for instrumental crimes, such as theft or drug dealing (Achatz and MacAllum, 1994; Johnson, 2000).

The FFCWS found that 90% of unmarried fathers (most of whom were disadvantaged) provided financial and emotional support to mothers during pregnancy (Carlson and McLanahan, 2001; McLanahan, Garfinkel, Reichman, Teitler, Carlson, and Audigier, 2003), despite much engagement in drug use and physical abuse found in this and other samples of disadvantaged men (Waller and Swisher, 2006). Findings such as these, along with a considerable amount of recent work and academic debate, has begun to dismantle the false projection of the low-income, black father as one who is "invisible, irresponsible" and contributes "little economically to the well-being of their children" (Jarrett, Roy, and Burton, 2002: 211; see also Coles, 2009; Coles and Green, 2009; Marsiglio, Amato, Day, and Lamb, 2000) and instead depicts disadvantaged, unmarried, and black fathers— some of whom may also be involved in criminal activity— as highly involved (Hamer, 2001; Huang, 2006; King, Harris, and Heard, 2004; Waller, 2002; Young, 2003).

Since women are traditionally the primary caregiver and they are more likely to make drastic changes to make up for losses to their physical capital (e.g., enter the workforce for the first time, take on multiple jobs, greatly increase the number of hours worked), the reduction in the amount of time they have to spend with their children tends to be greater compared to the changes that men make in light of a partner's incarceration (Carlson and Cervera, 1992; Comfort, 2008; Hagan and Dinovitzer, 1999). These losses further contribute to declines in mothers' psychological well-being and increases in stress and anxiety (i.e., human capital) and in turn, social capital.

Marriage or Partnership

The removal of a male partner or father results in a unique restructuring of roles (Carlson and Cervera, 1992; Christian, 2005; Codd, 2000). Generally, the wife or girlfriend continues to fulfill her own role in the family, while also taking on the additional role and tasks of the male partner since she can no longer rely on his social capital to meet family obligations. In some families and communities where the traditional father role is characterized by masculinity and authority (see Anderson, 1990), the mother may choose to retain the father as the satellite head-of-household, with respect being given to his authority and decision-making role. Children in these situations are often told to 'wait to ask Dad' regarding major parenting decisions (Carlson and Cervera, 1992; Codd, 2000), reducing the amount of control that the remaining parent has over her children (Carlson and Cervera, 1992; Parcel and Menaghan, 1993). In other situations, the mother may act as a "gatekeeper" to her children, increasing her control over the amount and means of contact she allows while the father is removed from the home (Classens, 2007). Overall, many women report hardships managing their children while their partner is incarcerated (Codd, 2000; Howlett, 1973; Morris, 1965). Role strain and additional anxiety reduces women's human capital, as well as social capital in the form of withdrawal from relationships.

Incarceration can also place the entire relationship in jeopardy (Brodsky, 1975; Carlson and Cervera, 1992; Fishman, 1990; Tach and Edin, 2011). The relationships in question are often already strained by poverty, drug use, criminal activity, and other stressors, making them highly susceptible to divorce or break-up during periods of incarceration. Although Carlson and Cervera report that "some marriages [and

relationships] respond to these circumstances (incarceration) by improving—becoming closer and healthier" others find that "the majority respond by deteriorating" (1992: 25; see also, Brodsky, 1975; Fishman, 1990; Freedman and Rice, 1977; Hannon, Martin, and Martin, 1984; Tach and Edin, 2011).

The likelihood of divorce among incarcerated men is extremely high (Lopoo and Western, 2005; Pattillo, Weiman, and Western, 2006; Western, Lopoo, and McLanahan, 2004). Lopoo and Western (2005) find that incarcerated men experience divorce more quickly than the general public, reaching a divorce rate of 50% in about one-third of the time. Relationship turmoil or divorce brought on by incarceration reduces the social capital of wives, girlfriends, and children of returning offenders due to "knifing off" or reductions in contacts, such as relationships with their ex's extended relatives, friends, and larger neighboring networks. In addition, the stability of living arrangements, school, work, and childcare is jeopardized, causing additional relationships to also be lost (e.g., work, school, neighbors).

Relationships that do not dissolve under the initial stress and isolation of incarceration are still in jeopardy when the partner returns. Due to the hostile environment of male prisons and stress caused by separation from their family, many men return home in a state of depression, anxiety, and confusion surrounding new relationship roles and lacking strategies for family coping (Showalter and Hunsinger, 2007). They often struggle to adjust from the strict and impersonal interactions among inmates and staff in prison (Carlson and Cervera, 1992) and return alienated from law-abiding society (Lerman, 2013), making it difficult for them to rekindle broken bonds with their partners and family members who may also hold resentful attitudes towards

them for their absence. Therefore, the social capital of the entire family is compromised even among families who remain intact.

Extended Family Networks

Regardless of divorce or a break up, women tend to withdrawal from outside social contacts with family, friends, and neighbors (Carlson and Cervera, 1992; Morris, 1965; Rosenfeld, Rosenstein, and Raab, 1973). This often occurs due to the strain caused by a reliance on family for support following a partner's incarceration (Comfort, 2008; Edin and Lein, 1997).

Initially, the incarceration of a loved one may result in the strengthening or even creation of bonds among family members and extended family in the community as they band together to determine what should be done, schedule visitations and travel arrangements to the prison, discuss how to care for the remaining partner and their children, and discuss practical matters, such as assistance with financial issues or transportation to work and school. As these relationships evolve, however, and as stress surmounts, they often result in strains and resentments within extended family networks due to the burdens that they have caused (Carlson and Cervera, 1992; Comfort, 2008; Edin and Lein, 1997). Kin networks involve sensitive dynamics and patterned expectations, instilling pressure on those who take from the network to be able to return the support that was given to them in another member's time of need (Antonucci, Fuhrer, and Jackson, 1990; Neighbors, 1997). These networks are extremely vulnerable in disorganized neighborhoods due to limited resources and constant requests for assistance (Miller-Cribbs and Farber, 2008; Neighbors, 1997).

Further, Braman (2003) found that many women hide the incarceration of their partner or details of it from friends and family due to stigma. Therefore, the kin networks that are available are not fully utilized for monetary or emotional support and the hiding of information leads to withdrawal from relationships overall. He argues that the stigma endured by female friends and relatives is more damaging than that endured by former inmates since men are more likely to deflect blame and identify with redemption scripts whereas women are more likely to internalize failure in the form of depression and withdrawal (Braman, 2003).

Although many women report receiving assistance from extended family, most women find that the support that they receive from relative networks is not sufficient and report receiving more support from their own families than from the families of their husbands (Carlson and Cervera, 1992). Many women of incarcerated partners report a lack of supportive friend and kinship networks (Bates, Lawrence-Wills, and Hairston 2003; Braman, 2004) and say that they are struggling to cope alone or with their children (Bakker, Morris, and Janus, 1978; Hinds, 1981; Nurse, 2002; Swan, 1981). According to Moore (1996), the failure of a husband's or boyfriend's family to lend monetary and emotional support in a time of need often causes resentment and devaluation of men in the community, which is then socialized in children in these settings, further contributing to low marriage rates (Braman, 2003) and restricting social capital at the aggregate-level.

Another source of strain to family ties comes from prison visits (Christian, 2005). Visits, although also a source of joy, excitement, and an aid in the continuation of ties with the incarcerated, which decreases their likelihood of recidivism (Casey-Acevedo and Bakken, 2002; Petersilia, 2002), are a source of strain, stress, and sadness that often

evoke feelings of helplessness and pain for family members (Carlson and Cervera, 1992; Comfort, 2008; Fishman, 1990). These visits induce stress and financial burdens that often result in a crippling of family ties (Christian, 2005; Comfort, 2008). In response to this, family members often put visits on hold for periods of time when they become too overwhelming, tiresome, stressful, or financially debilitating (Christian, 2005). Additionally, these visits sometimes not only lead to weakened families ties, but as Christian (2005) points out, often remove the remaining social ties from the community, taking these women with them and contributing to an overall absence of ties in the community, leaving it incredibly vulnerable. As Christian (2005) explains, some of these women take a bus several hours away to visit with their incarcerated partners or family members every or every other weekend, taking away time spent in the community, supervising children, and involvement in neighborhood activities, as well as contributing to their own "secondary prisonization" and institutionalization (Comfort, 2008; Petersilia, 2002).

NEIGHBORHOOD-LEVEL CONSEQUENCES OF COERCIVE MOBILITY

The consequences of incarceration to physical, human, and social capital are exacerbated at the neighborhood-level. As shown in Figure 3, the *neighborhood-level* consequences of incarceration can accumulate indirectly as a result of *individual-level* restrictions to *physical, human, and social capital* (Figure 3, box 2 to box 3) or can be directly affected by *incarceration* (Figure 3, box 9 to box 3). For example, effects to the neighborhood economy are the result of men and women's restricted physical, human, and social capital (indirect neighborhood-level consequences), along with aggregate effects that prevent businesses from settling into the area (direct neighborhood-level

consequences). Similarly, marriage markets and aggregate informal social control are disrupted by incarceration through reductions to individual and neighborhood-level capital.

Women's Aggregate Social Capital

The Economy

Incarceration affects individual physical and human capital in the form of job prospects, which build to impact the entire community and neighborhood economy (Western and Beckett, 1999). Freeman (1992) finds that incarceration produces a permanent impact on the earning potential of returning male offenders (see also Pager, 2003). But women also experience losses in physical and human capital in terms of income, education, and career training, reducing the probability that they will eventually secure long term employment, regardless of their criminal history. Rose and Clear (1998: 462) conclude that the "large-scale incarceration of men may influence the earning power of the women they leave behind" due to the lack of work experience that incarceration creates within disadvantaged areas (see also Browne, 1997; Huebner, 2005). Furthermore, high rates of incarceration contribute to a reduction in labor force attachments, isolating residents and depleting their connections and networking experiences (foundations for social capital) that they have with successful individuals (see Wilson, 1987).

Incarceration is also directly related to declines in the neighborhood economy due to businesses choosing not to invest in areas with high rates of incarceration due to the limited market of consumers and skills of potential workers. Without reputable and profitable businesses choosing to settle and invest in these areas, jobs simply do not exist.

This means that the financial promise and resources that new businesses and developments bring are also absent, contributing to a further depletion of internal and external resources (physical and human capital) from which residents can draw (Wilson, 1987).

Additionally, Hagan and Dinovitzer (1999: 131) note that "the collateral costs of this disinvestment are social as well as economic." Investments into prisons means displaced investments taken from other areas, such as education, health care, and other social institutions (Hagan and Dinovitzer, 1999), contributing to additional damage and offering little support for struggling residents. The economic effects of incarceration return to the individual-level to again stifle the dismal job prospects of individual residents, particularly women with less work experience, education, and potential earning power (AAUW, 2014).

Marriage Markets

Incarceration contributes to high rates of divorce and delays and reduces the probability of marriage for entire communities (Huebner, 2005; 2007; Wilson, 1987). Regardless of whether a woman's partner or members of her local peer group become incarcerated, she is less likely to marry simply due to her proximity to concentrated rates of incarceration and the norms and socialization processes that are associated with this context (Huebner, 2005; 2007; Wilson, 1987). First of all, there are simply fewer men available for women to marry in areas with high incarceration rates due to their current incapacitation or frequent flux of removal and reentry. For example, in the high incarceration neighborhoods of Washington, DC there are only 62 men for every 100 women (Braman, 2003: 86). Second, men who remain in the community or return from

prison may not be viewed as desirable marriage partners due to their lack of stable employment and the stigma of a criminal record (Darity and Myers, 1989; Huebner, 2005; 2007; Lynch and Sabol; 2004a, 2004b; Myers, 2000; Wilson, 1987).

Wilson (1987) finds that men's attractiveness as "marriageable men" declines with their employment probability. Furthermore, Freeman (1996) explains that all black men within disadvantaged communities may be viewed as less desirable partners due to limited employment opportunities, regardless of their criminal records (see also Huebner, 2005; 2007; Pager, 2003). Therefore, high incarceration and unemployment may explain the particularly low marriage rates of African Americans and may shift marriage rates further so that it is no longer a norm or expectation within these communities (Lynch and Sabol, 2004a).

At the aggregate-level, the absence of suitable fathers and marriageable men contributes to the importance of the peer group and deprioritizing of the nuclear family (Moore, 1996). Men exhibit a detached "cool pose" in order to emphasize their independence from women and family and demonstrate the strength of "being a man" (Anderson, 1999; Majors and Billson, 1992; Moore, 1996; Wilson, 1987). Although most women residing in disadvantaged communities desire and value marriage (Edin and Kefalas, 2005; South, 1993), their outlook is often pessimistic, viewing marriage as unlikely. Jarrett (1998: 390) finds that some women in these communities think of marriage and stable family formation as an out of reach "little white girls dream." This detachment from family and marriage frees men from important sources of social capital that could otherwise supply informal social control and prevent them from engaging in criminal activity (Sampson and Laub, 1990).

Braman (2003; 2004) further extends the consequences of marriage dissolution to the aggregate dissolution of families in high incarceration neighborhoods. He argues that family norms and roles are eroded by incarceration, which "has been pulling apart the most vulnerable families in our society" for the past 30 years (Braman, 2003: 122-123; 2004). Specifically, he finds that the skewed ratios of men to women encourage infidelity since women sacrifice more and demand less of the limited pool of available men. The imbalanced sex ratios and subsequent rises in infidelity increases the rate at which children are born to multiple partners and reduces parental investment, particularly for men, serving to "undermine family formation and promote family dissolution" (Braman, 2003: 122). The result is that single-headed households are more common than co-parenting or marriage in neighborhoods with high incarceration rates. In fact, Braman's (2003) investigation of incarceration and parenting in the District of Columbia revealed that an incarceration rate above 2% was associated with fathers being absent from over 50% of families. Consequences of marriage and family dissolution contribute to continued incarceration and the "feedback" of reductions in physical, human, and social capital at the individual-level.

AGGREGATE REDUCTIONS IN WOMEN'S INFORMAL SOCIAL CONTROL

Low marriage rates and high proportions of female-headed households also contribute to reductions in supervision and women's informal social control, referring to their ability to react to and prevent crime, at the neighborhood-level (Figure 3, box 4). Incarceration reduces the amount of family social capital available for the supervision of children and teens, increasing the likelihood that they will experience considerable behavior problems (Parcel and Menaghan, 1993; Wakefield and Wildeman, 2011),

including delinquency (Hagan and Dinovitzer, 1999). With mothers taking on more work and fathers gone from the home, children are left unsupervised and are free to engage in deviant activities in their parents' absence (Clear, Rose, and Ryder, 2001; Sampson, 1987). At the neighborhood-level, concentrated rates of incarceration remove a large proportion of men, leaving behind an additional segment of female-headed households and thereby reducing the entire community's ability to supervise its children and protect its residents (Parcel and Menaghan, 1993; Rose and Clear, 1998).

Sampson, Morenoff, and Earls (1999) explain that neighborhoods with many incarcerated parents experience limited organizational participation, involvement in systemic networks, and intergenerational closure, referring to the ability of residents to know the parents or relatives of their children's friends. Limited participation in the exchange of information regarding children's whereabouts and activities restricts the entire supervisory capacity of the neighborhood. In addition, neighborhoods that experience high incarceration are also highly disadvantaged, which predicts lowered expectations for shared child control, or expectations that other parents or adults will intervene to control the behavior of neighborhood children (Sampson, Morenoff, and Earls, 1999).

At the neighborhood-level, women's social capital adds particular relevance to the theory of coercive mobility not only because women are left to supervise and control the neighborhood while men more commonly cycle in and out due to incarceration, but more importantly, women's social capital, in terms of neighborhood relational networks, may be more important for informal social control (see Rountree and Warner, 1999). Specifically, Rountree and Warner (1999) found that the networks that women are

imbedded in are more effective for reducing violent crime. Therefore, the effect of coercive mobility on women's social capital is likely to have a much greater impact on informal social control relative to men's social capital, including the social capital of men who are directly affected by incarceration.

Furthermore, women's networks have been shown to be much less effective for crime reduction in contexts with a large proportion of female headed-households like those with high rates of incarceration, suggesting that men's networks (and other capital) (see Figure 3, boxes 5 and 6) may serve as a support system to free up and allow women's capital to function for social control (Figure 3, box 2 to box 4) (Rountree and Warner, 1999). Therefore, although men's ties are not as effective for social control, they add to the effectiveness of women's ties. This is because men add to the physical, human, and social capital of the relationship or family by providing income, resources, and time that enables women to supervise more effectively, spend more time with their children, and also have more time available for organizational participation and interaction in the systemic networks that facilitate informal social control. Without this support, women's social capital at the neighborhood-level is spread thin and results in aggregate reductions in supervision and informal social control (Rountree and Warner, 1999).

Additionally, women's networks may be more effective for the reduction of violent crime because they tend to be more localized compared to men's (Bernard, 1981; Campbell and Lee, 1992; Michelson, 1985; Rosenthal, 1985). In Michelson's 1977 study of couples, wives were more likely to report a neighbor as someone who they had the most frequent contact with compared to husbands. More recent studies have controlled for full and part-time work, marital status, and the presence of children and still found

that women had larger local relational networks compared to men (Campbell and Lee, 1990; 1992). Women's social capital may also be more effective for informal social control compared to men's since they are often the carriers of information flow, including information relative to supervision and their children's whereabouts (Rountree and Warner, 1999; Sampson and Groves, 1989; Sampson, Morenoff, and Earls, 1999). Therefore, women's networks more readily operate towards social control.

However, since women's networks are more localized they tend to be more negatively affected by the array of local network events discussed as inhibitors of human capital, including the death of a family member, divorce, and the incarceration of a loved one. Women tend to respond to these events with internalizing depressive and anxious symptoms (Maciejewski, Prigerson, and Mazure, 2001; Wildeman, Schnittker, and Turney, 2012). At the aggregate-level, women's withdrawal from local networks results in a decline in community social capital and an overall reduction in the effectiveness of informal social control.

Overall, women who experience the incarceration of a partner or loved one not only deal with issues associated with being a single-headed householder, but also encounter additional burdens, including unexpected costs associated with incarceration, role strain, parenting issues, child behavior problems, stigma, managing extended family ties, and psychological symptoms, further diminishing their capital and potential for informal social control. At the neighborhood-level, women must face the additive effects of these issues, along with the hardships that accompany the neighborhood context, including concentrated disadvantage, high unemployment, low marriage rates, and instability due to coercive mobility (Rose and Clear, 1998), further depleting the

effectiveness of their social capital for informal social control. Therefore, the effectiveness of women's social capital for informal social control within the context of coercive mobility is especially limited. Shown in Figure 3, a deficiency in both women's and men's *informal social control* (boxes 4 and 7) results in increased *neighborhood crime* and delinquency (box 8) (Sampson, 1987), which extends to exacerbate the cycle of *incarceration* (box 9), feeding once again into *neighborhood structure* (box 1) and individual, familial, and neighborhood consequences (boxes 2, 3, 5, and 6).

EXTENSIONS TO ALL NEIGHBORHOOD RESIDENTS

Thus far, the majority of theoretical relationships have focused on ways that individuals are impacted by the incarceration of someone they know, along with both direct and indirect neighborhood-level consequences. However, the individual-level consequences of incarceration are not limited to individuals who are linked to the incarcerated. In fact, although the personal individual-level consequences of incarceration are theoretically important for illustrating how indirect neighborhood-level consequences unfold in a synthesized gendered theory of coercive mobility, collateral consequences to the wives, girlfriends, partners, family, and friends of the incarcerated have been widely examined in previous work (Carlson and Cervera, 1992; Comfort, 2008; Fishman, 1990; Wakefield and Wildeman, 2014). The central goal of this dissertation is to describe the impacts of incarceration to women who reside within high incarceration neighborhoods, regardless of their associations with the incarcerated themselves, an area of research that has received very little attention (see, for example, Wildeman and Western, 2010).

Indeed, the probability that individuals know someone who is or has been to prison is more likely than not. Rose and Clear (2004) found that among a general sample

of Tallahassee residents, 64.9% of respondents either knew someone who had been incarcerated or was incarcerated at some point themselves (9.0%). Despite widespread connections to incarcerated individuals throughout the general public, knowing someone intimately who has been incarcerated is not a necessary condition to experience individual-level effects. These community consequences of incarceration occur to individuals who simply reside within high incarceration communities and are hypothesized to have "feedback" effects of neighborhood-level consequences at the individual-level. Those residing in high incarceration neighborhoods bear the burden of poor economic conditions in the form of reduced job prospects, educational standards, income earning potential, neighborhood safety, involvement in neighborhood activities and community engagement. Therefore, all community residents, including men, women, and children, are impacted.

THE PRESENT STUDY

In sum, the consequences of incarceration for female residents, as well as the gendered or differential effects of incarceration to women and men, represent an evident gap in the literature. The present study seeks to overcome this gap by proposing a gendered theory of coercive mobility, which incorporates women's capital as an additional mechanism for understanding how coercive mobility unfolds to result in counterproductive effects to informal social control in communities with high rates of incarceration. Furthermore, women's capital is paramount for understanding how processes of coercive mobility unfold at the individual and neighborhood-level. Although, men's social capital is also likely to affect community informal social control,

women's social capital is likely to be more influential since women's networks have been shown to be more effective for crime reduction (Rountree and Warner, 1999).

This dissertation tests the proposed gendered theory of coercive mobility using data on Baltimore residents and neighborhoods by estimating consequences to women's and men's forms of capital and social control at both the individual and neighborhood-level. Figure 3 presents the complete set of relationships present within this proposed theory. Within the figure, individual-level consequences to *women's capital* are the result of *neighborhood structure*, as well as the *level of incarceration* and *men's capital* (physical, human, and social). *Women's physical and human capital* contributes to their *social capital* and the *social capital of their families*, which subsequently affects *women's aggregate social capital*. At the neighborhood-level *incarceration* "feeds back" to affect aggregated outcomes, including the *physical*, *human*, and *social capital* of women, subsequently contributing to women's aggregated *social control*. Finally, *women's social capital* has been shown to be more effective for *social control* compared to men's (Rountree and Warner, 1999), heightening its importance for community rates of *crime* and *incarceration*.

RESEARCH QUESTIONS AND HYPOTHESES

The project investigates the central relationships within the proposed gendered theory of coercive mobility. First, each of the following research questions is examined separately for women and men in order to determine how women (as well as men) are impacted by neighborhood-level incarceration (i.e., the association between incarceration and women's and men's outcomes, separately, are compared to zero). Second, the research questions seek to reveal whether the significant findings are distinctly gendered,

meaning that the associations between incarceration and women's outcomes are significantly different from the associations between incarceration and men's outcomes. Lastly, potential mediators of the relationship between incarceration and women's and men's social control outcomes are examined.

Research questions are examined at both the individual and neighborhood-level, as well as for both prison admissions and prison releases. Figure 4 provides an overview of the individual and neighborhood-level effects of incarceration, summarizing the four possible direct and indirect ways that individuals and communities are affected.

[Figure 4 about here]

First, individuals who reside in communities with high rates of incarceration experience direct individual-level effects of incarceration in the form of depleted physical, human, and social capital (Figure 4, relationship #1). Second, individual effects can build to produce aggregated indirect community effects (Figure 4, relationship #2). Third, communities may experience direct effects of incarceration rates that are distinguishable from the sum total of individual-level effects (e.g., poor economy due to businesses withdrawal from high incarceration neighborhoods) (Figure 4, relationship #3). Lastly, effects to the community (both direct and indirect) "feed back" to produce indirect individual-level consequences to residents (Figure 4, relationship #4).

All hypotheses are derived from literature on the gendered collateral consequences of incarceration, along with research on coercive mobility. Hypotheses do not differentiate between prison admissions and releases, as well as the level of analysis, given the limited extant literature in these areas:

Research Question 1: Are women's and men's individual and neighborhood-level forms of capital (physical, human, and social) affected by incarceration? Are these effects gendered?

> *Hypothesis 1a*: Prison admissions and releases will significantly impact women's forms of capital (physical, human, and social) at both the individual and neighborhood-level.
>
> *Hypothesis 1b*: The effects of prison admissions and releases on women's forms of capital will be significantly different (larger) from the effects of incarceration on men's forms of capital.

Research Question 2: Are women's and men's individual and neighborhood-level social control efforts affected by incarceration? Are these effects gendered?

> *Hypothesis 2a*: Prison admissions and releases will significantly impact women's social control (i.e., informal, formal) at both the individual and neighborhood-level.
>
> *Hypothesis 2b*: The effects of prison admissions and releases on women's social control will be significantly different (larger) from the effects of incarceration on men's social control.

Research Question 3: Do women's and men's neighborhood-level forms of capital (physical, human, and social) mediate the relationship between incarceration and individual and neighborhood-level social control?

> *Hypothesis 3*: Women's neighborhood-level physical, human, and social capital will mediate the relationship between incarceration and social control at both the individual and neighborhood-level.

Chapter Three proceeds to introduce the data and measures included in the present study. The following chapter, Chapter Four, introduces the analytic strategy used to empirically test these proposed relationships.

CHAPTER THREE: DATA AND MEASURES

DATA

Data are drawn from the "Effects of Arrests and Incarceration on Informal Social Control in Baltimore, Maryland Neighborhoods, 1980-1994" (2003), in which Lynch and Sabol linked prison admission and release rates (1987, 1992, and 1994) to the 30 Baltimore neighborhoods included in Ralph Taylor's "Crime Changes in Baltimore 1970-1994" resident surveys (n= 704) (1999a).

The design purpose of the "Crime Changes in Baltimore, 1970-1994" study was to investigate the relationships among physical deterioration, crime rates, residents' attitudes, and neighborhood structure. The data include crime rates obtained from the Baltimore Police Department from 1987 to 1992, as well as 1990 census items matched by neighborhood identifiers. Neighborhoods were originally sampled in 1982, when 66 of the 236 Baltimore neighborhoods were randomly selected for block assessment. Then in 1994, 30 of these original neighborhoods were selected using stratified sampling[3] based on crime data in order to capture equal segments of neighborhoods that experienced a large change in violent and property crime, a small change in violent and property crime, and a change in one type of crime, but not the other.[4] Once selected, eight census blocks within each neighborhood were randomly chosen for inclusion. Addresses were selected from both sides of the street block using simple random sampling from a list of telephone numbers merged from three separate phone listings until a quota of at least 4 and no more

[3]The sampling procedure excluded neighborhoods that were not included in the 1982 block assessment, had changed boundaries since 1979, did not have a sufficient number of telephone listings available, or were dominated by large apartment buildings.

[4]Comparisons by Taylor, Brower, and Drain (1979) between the 30 neighborhoods selected for inclusion in the 1994 survey and the 36 neighborhoods that were not revealed no significant differences on key variables, including the percent black and proportion of owner-occupied units.

than 16 interviews were completed per block. The head of the household or his or her spouse was randomly selected to complete an interview. All interviews were conducted by telephone, using CATI (Computer Automated Telephone Interviewing) (Taylor, 1999b). The response rate of the 1994 survey is 76 percent (Taylor, 1999a). The resulting sample includes 18-24 respondents in each neighborhood with an average of 23 respondents per neighborhood for a total sample size of n=704.

Lynch and Sabol (2003) obtained prison admission and release data from the Maryland Department of Public Safety and Corrections (MDPSC). They geocoded the address of each person admitted to or released from prison to correspond with the appropriate Baltimore neighborhood using latitude and longitude coordinates (Lynch et al., 2002). Incarceration data were then linked to Taylor's (1999a) neighborhood survey. The admission and release counts and rates for 1987, 1992, and 1994 are included in the achieved data (Lynch and Sabol, 2003).

These data are exceptionally rare, existing as the only archived data with neighborhood-level incarceration rates linked with individual-level interview or survey data. A strength of the data is the unique construction of neighborhood boundaries through interviews with neighborhood leaders and residents by Taylor, Brower, and Drain (1979). Residents were asked if they agreed with the established boundaries and neighborhood names shown on a map and adjustments were made to more accurately depict the neighborhood according to those who live there (Snell, 2001; Taylor, Brower, and Drain, 1979). This technique improves the validity of survey items aimed at capturing neighborhood-level phenomenon since the respondent's understanding of the "neighborhood" coincides with the actual boundaries of study. The newly identified

boundaries created by Taylor and colleagues were adopted as officially named neighborhoods by the Bureau of the Census beginning in 1980 (Snell, 2001). In addition, two forms of social control, informal social control and resident-initiated formal social control, are included in the data, unique to other neighborhood surveys. Although widely used *global* measures of informal social control were previously thought to theoretically capture resident-initiated formal efforts (Sampson, 2006), these combined measures have been more recently criticized for their tendency to pick up on informal social control alone (Kubrin and Weitzer, 2003; Warner, 2007). Finally, since these data do not allow for the identification of respondents who know or are related to someone who has experienced incarceration, the results of this study will provide a conservative estimate of the effects of incarceration at the individual-level.

BALTIMORE: CONTEXT OF THE PRESENT STUDY

Data for the present study are derived, in part, from surveys with Baltimore residents (Taylor, 1999a). Thus, it is important to understand the context of Baltimore to investigate the proposed research questions. Baltimore is often described as a "city of neighborhoods" (McDougall, 1993) with an eclectic range of structural and cultural characteristics, making it an ideal setting for the present study.

Historically, like all major U.S. industrial cities, Baltimore experienced population declines due to the downfall in manufacturing jobs beginning in the 1950's, a trend that continued into the 1990's due to middle-class residents leaving for the surrounding metropolitan areas. These losses contributed to increased poverty and crime within the city. Today, Baltimore is a dynamic white-ethnic and black city (McDougall, 1993) with just over 600,000 inhabitants thanks to its first population increase in 2012.

The city is approximately 31.6% white and 63.3% black, a segment that doubled from 23.8% in 1950 to 46.4% by 1970 during the second great migration (U.S. Census, 2010). Drastic changes in racial composition contributed to racial tension and racialized housing practices, fragmenting many neighborhoods.

Similarly sized cities also experienced declines in population beginning in the 1950's and continuing well into the 1990's for most cities. During the 1970's, for example, nearly half of America's large cities shrank in population by 10%, while St. Louis, Cleveland, and Detroit each shrank by more than 20% during this time period (Rappaport, 2003). Baltimore experienced a 3.5% decline in population during the 1970's and continued to lose between 6.5% and 13.0% each year over the next three decades (U.S. Census, 2010). While some cities experienced temporary revitalizations in the 1980's and 1990's, the overall losses are astonishing over the longer period; between 1950 and 2000, St. Louis lost 59% of its total population, while Cleveland, Detroit, and Newark lost more than 45% each (Thompson, 1999) and Baltimore shrank by 35% (U.S. Census, 2010).

The shared histories among America's industrial cities has resulted in similar racial compositions and associated tensions that exist today. For example, between 1970 and 1980 in Detroit, more than 310,000 white city residents left for the suburbs, increasing the percentage of black residents from 43.7% to 67.1% in just ten years (Thompson, 1999), abruptly bringing racialized sentiments and practices. Similar trends in other cities resulted in the largely segmented black-white demographics that exist in Baltimore today (31.6% white and 63.3% black). For example, St. Louis's 319,294 residents are approximately 49.2% black and 43.9% white. Cleveland's population is

53.3% black and 37.3% white, Detroit is 82.7% black and 10.6% white, and Newark is 52.4% black and 26.3% white (U.S. Census, 2010).

White-black segregation can be captured within a dissimilarity index (DI), which measures the relative separation of groups across all neighborhoods within a metropolitan area (Frey and Myers, 2011; Quinn and Pawasarat, 2003).[5] Baltimore's white-black dissimilarity based on the 2000 census index was 75.2 (ranked 28th nationally), meaning that approximately 75% of white people would need to move to another neighborhood to make whites and blacks evenly distributed across all neighborhoods (Frey and Myers, 2011). Detroit was ranked as the 2nd most segregated (white-black segregation) city in the nation with a dissimilarity index of 86.7, while Newark was ranked 6th (DI=83.4). Cleveland (DI=79.7) and St. Louis (DI=78.0) were ranked among the top twenty of the nation's most racially segregated cities based on 2000 census data (ranked 9th and 13th, respectively) (Frey and Myers, 2011).

The changes occurring in Baltimore in terms of population and segregation are typical of other similar-sized cities during this time (Taylor, 2001). Taylor (2001) argues that Baltimore, and specifically, the data used in the present study are generalizable to other large cities due to similarities in poverty rates, housing prices, and additional demographics, including age, unemployment, and rates of homeownership, as well as changes in crime rates during the period under study. Examining Part I Index crimes, excluding arson, in Baltimore compared to 15 other moderately-sized cities spread geographically throughout the country (ranging in population from 300,000 (El Paso) to 2 million (Philadelphia)), Taylor and colleagues (2001) found that although Baltimore

[5]Several other methods have been proposed and utilized for comparing segregation among groups, including block-level examinations (see Frey and Myers, 2011 for a review). Since this is not a direct focus of the present study, the most conventionally used method was chosen for comparison.

experienced higher crime rates than all but one of the 15 comparison cities, the year-to-year changes in crime rates leading up to 1994 (from 1970 through 1992) closely reflected the changes occurring in comparison cities. For example, robbery rates in Baltimore (12 per 1,000 residents) were about 3 times that of comparison cities beginning in 1970, but fell to about 9.5 per 1,000 by 1977. From this point on, the fluctuations in rates matched that of the group average, rising throughout the remainder of the 1970's and peaking in 1981 before dropping throughout the mid-1980's. In 1988, with the rise of the crack epidemic, Baltimore's robbery rate began to rise at a steeper rate (resulting in a rate of 17 per 1,000 residents in 1992) compared to the comparison group average, which leveled off at a rate of around 6.5 per 1,000 in 1991 and 1992. Despite Baltimore's steeper incline during the last four years of these trends, Taylor and colleagues (2001) conclude that the change in crime rates between Baltimore and comparison cities is similar. Overall, during the period from 1970-1992 Baltimore's robbery rate grew by 55%, while comparison cities grew by 40% on average (Taylor, 2001). Fluctuations in other index crimes in Baltimore also mimic comparison cities (Taylor, 2001).

In addition, incarceration rates for the state of Maryland fall somewhere in the middle in terms of a national comparison for the period under study (1990-1994). In 1994, Maryland was ranked 37th nationally with an incarceration rate of 395 prisoners with a sentence of more than 1 year per 100,000 residents (BJS, 1995). Maryland's rate is only slightly higher than the state-wide average of 356 prisoners per 100,000 residents that same year, in which rates ranged from 78 prisoners per 100,000 residents in North Dakota to 1,583 prisoners per 100,000 residents in the District of Columbia (BJS, 1995).

City-level rates are more difficult to obtain, particularly for an earlier time period. However, more contemporary data allows for comparisons to be made among cities within Maryland, which are more likely to have experienced similar changes in trends compared to cities outside of the state. While Baltimore experienced the highest incarceration rate in the state with 1,255 prisoners per 1000,000 residents in 2010, eight other cities experienced incarceration rates above the state's rate, including Hagerstown (1,034), Cambridge (925), Salisbury (870), Aberdeen (702), Easton (445), Havre de Grace (409), and Annapolis (394) (The state-wide incarceration rate in Maryland was 383 prisoners per 100,000 residents in 2010) (Justice Policy Institute and Prison Policy Institute, 2015).

Comparisons among cities outside of Maryland only provide a partial understanding of where Baltimore falls since they are only available for some cities. Recent rates in New York City (2012) are much lower compared to Baltimore, at 448 prisoners per 100,000 residents, although, New York City is unique in its recent decline in rates compared to most other major U.S. cities (NYC.gov, 2013). Similarly, recent incarceration rates in Chicago, for example, which incarcerated 650 prisoners per 100,000 residents in 2006 (Sampson and Loeffler, 2010) also depict Baltimore as much higher in comparison, while cities like Detroit, which incarcerated close to 1,200 inmates per 100,000 residents in 2007 (The Pew Center on the States, 2009), are more similar compared to Baltimore. Other cities, such as Washington, D.C., which incarcerated nearly 2,000 inmates per 100,000 residents in 2009 (Justice Policy Institute, 2010), represent the high end of incarceration rates in the United States.

Although crime rates in Baltimore and incarceration rates in Maryland were not unprecedented in the period under study (1990-1994), the growing level of concern about crime in the U.S. was reaching its peak (Simon, 2007; Taylor, 2001; Zimring, 2008). The concern over crime beginning in this period was due, in large part, to the response to the increases in violence following the growth in crack cocaine markets, as well as the political emphasis that followed (see, for example, Simon, 2007). Additionally, these markets contributed to stark contrasts between city and suburban crime trends, which were markedly different among Baltimore neighborhoods, causing particular concern for the safety of urban neighborhoods. Specifically, the ratio between the central city crime rate in Baltimore and its surrounding metro area increased from about 2:1 to 3:1 from the early 1980's to the early 1990's (Taylor, 2001). Furthermore, the percentage of "safe" neighborhoods was declining, while the proportion of "unsafe" neighborhoods in Baltimore grew. In 1970, the safest 20% of neighborhoods had assault rates of .005 per 1,000, but by 1980 only 3-4% of neighborhoods had rates this low (Taylor, 2001). Similarly, no neighborhoods had robbery rates of over 1 per 1,000 in 1970, but nearly half of neighborhoods did by 1980. These trends (although more dramatic from 1970-80) continued into the next decade.

Observing the perceived success of policing strategies implemented in New York City, Baltimore officials eventually responded to the increases in violent crime trends by adopting a similar style of policing, known for its aggressive tactics and "order-maintenance" stop and frisk policies following the election of Mayor Martin O'Malley in 1999 (Harcourt, 2009; Trettien, 2006). First, however, Commissioner Ed Woods would implement a "community policing" strategy beginning in 1990, which accompanied the

creation of a violence task force aimed at homicide reduction. The strategy lasted until 1994 when it was abandoned due to falling arrest and clearance rates since a hiring freeze limited the number of officers available for its implementation. Therefore, the period under study (1990-1994) does not encompass the more well-known era of "zero tolerance" strategies implemented in Baltimore to fight rising violence. In fact, it includes an era of Baltimore policing that actively opposed the New York strategy and would only come to implement a "zero-tolerance" model following the implementation of yet another approach (Boston's Cease Fire model) and after hiring two more Police Commissioners (Ronald Daniel and Edward Norris, the latter of which was responsible for implementing the New York approach). This point is an important one given the "zero-tolerance" model's association with increased citizen complaints, and its potential to contribute to other negative side-effects for police-citizen relationships, including decreased police legitimacy, citizen compliance, resident-initiated formal social control, and the promotion of informal social control strategies among residents (See Harcourt, 2009; Trettien, 2006).

Indeed, the "community policing" tactics implemented by Commissioner Woods from 1990-1994 as well as earlier strategies, along with the steep increases in violent crime that took place during the period under study are likely to have contributed to nuanced police-citizen relations in Baltimore (see, for example, Harcourt, 2009). Therefore, it is important to take these conditions into consideration when interpreting the results of the present study with regards to their generalizability.

Overall, it is clear that Baltimore shares many historical and structural similarities with similarly-sized industrial American cities, arguably making it an ideal setting for the

present study. In addition, incarceration trends during the period under study (1990-1994) were on the rise, making it an ideal window of study. The study's timeframe also encompasses a more stable period following a long history of population and economic change. Furthermore, the study controls for the structural characteristics of neighborhoods, including incarceration, residential mobility, concentrated disadvantage, and prior crime. Finally, despite its historical placement, substantive similarities exist between contemporary Baltimore compared to the period under study, including economic conditions, incarceration rates (in Maryland), and crime trends. Violent crime rates, in particular, are returning to their 1990's peaks. In 2015, violent riots followed the controversial death of Freddie Gray that occurred while Gray was in the custody of Baltimore police. That same year, the city's murder rate reached 48.97 per 100,000 residents, surpassing its 1993 peak of 48.77 homicides per 100,000 residents (Rector and Fenton, 2015).

MEASURES

The main independent variables included in the present study are three-year changes in prison admission and prison release rates measured from 1992-1994. In addition, the study controls for neighborhood characteristics, including concentrated disadvantage and residential mobility, captured using 1990 census data.[6] Finally, the dependent variables, including forms of capital and social control, are captured in the 1994 survey.

[6]Additional neighborhood-level controls (see Chapter Four) include: neighborhood crime rate (averaged across 1990-1992), neighborhood population (1990 census), and lack of police response (1994 survey), the latter of which is only included in the models estimating social control.

DEPENDENT MEASURES

Two forms of social control, informal social control and resident-initiated formal social control, are included since they have been found to have different theoretical and empirical implications in previous work (Cwick, 2015; Warner, 2007). Although, coercive mobility theory in its current form only posits relationships between incarceration and informal social control, theorists highlight the interconnectedness of various types of social control, arguing as a main premise that an overreliance on formal social control may restrict informal social control (Clear, 2007; Rose and Clear, 1998). The present study acknowledges that, in addition to informal efforts, residents initiate formal social control by informing authorities of a crime, commonly by calling the police, which is likely to operate distinctly from informal efforts.

Two measures capture informal social control. The main measure is a scale similar to those found in extant work (Sampson, Raudenbush, and Earls, 1997; Warner, 2007). The second measure is a single item, which specifically captures informal social control efforts directed at neighborhood children. One measure, a scale similar to the scale for informal social control, but with respect to citizen's engagement of the police, captures formal social control.

Informal Social Control is a four-item scale (α=.83)[7] that captures respondents' perceptions of neighbors' willingness to intervene or react to deviant and criminal behaviors in their neighborhood. Respondents were asked "Suppose a suspicious person was trying to break into a neighbor's home" and "Suppose some teenagers around 15 or 16 years old were shouting and making a loud disturbance on your street around 11:00 at

[7]The alpha reliability scores for informal and formal social control and all scales combining dichotomous items were calculated using estimations of tetrachoric correlations (Lorenzo-Seva and Ferrando, 2012; Uebersax, 2006).

night." Responses to two follow-up questions, "Do you think any of your neighbors would personally try to stop the person?" and "Do you think any of your neighbors would get another neighbor's help to try to stop the person?" were coded "1" for "yes" and "0" for "no" for each scenario. All four responses were then averaged for each respondent. This measure was then aggregated to the neighborhood-level by gender by summing the individual scores separately for men and women and dividing each by the total number of men and women, respectively, within each neighborhood.

Reprimanding neighborhood children is also included as a form of informal social control. It is a single-item that asks, "During the past year have you tried to stop a neighbor's children from doing something they shouldn't be doing?" Responses include "yes" ("1") or "no" ("0"). Responses were aggregated to the neighborhood-level by summing the individual items separately for men and women and dividing each by the total number of men and women, respectively, in each neighborhood.

Formal Social Control (α=.68) captures residents' willingness to engage or call the police to help with neighborhood issues.[8] At the individual-level, formal social control includes the average of responses to the follow-up question "Do you think any of your neighbors would call the police?" for both scenarios (coded "1"= "yes," "0"= "no"). This measure was also aggregated to the neighborhood-level by gender by summing the individual scores separately for men and women and dividing each by the total number of men and women, respectively, within each neighborhood. Identifying consequences of incarceration for formal social control is of particular importance since it is likely to be

[8]The author acknowledges that face validity of this measure may overlap with measures of residents' legal cynicism or trust in police. This measure aims to capture residents' willingness to initiate or involve police in neighborhood issues regardless of the reasoning for doing so or not. In an attempt to separate residents' motivations from practical explanations for involving or not involving police a measure of the lack of police response is included as a control (see Chapter Four: Analytic Methods).

discouraged in high incarceration neighborhoods due to police cynicism and distrust of the criminal justice system (Wilkinson, 2007).

POTENTIAL MEDIATORS

Physical Capital

Income. A question within the 1994 survey asked respondents to estimate their annual household income in 1993 before taxes. Income responses range from "0" to "8," beginning with "below $5,000," and ending with "above $40,000" per year, increasing in $5,000 increments between categories. Income was aggregated to the neighborhood-level separately for men and women by calculating the average among included respondents.[9]

Human Capital

Education is a single-item, coded "1" if the respondent reported either graduating from high school or completing a GED (those who completed less than high school or GED were coded "0"). This item was aggregated to the neighborhood-level by calculating the average proportion of men and women who completed high school in each neighborhood.

Not in Workforce was coded "1" for respondents age 60 or younger who reported not being fully or partially employed at the time of the survey and said that they had not worked for pay within the past year. The average proportion of men and women who reported being out of the workforce was then calculated for each neighborhood to serve as the aggregated measure.

[9]Missingness for income is 12.2%. Missingness ranges from 0-4 men and 0-6 women in each neighborhood. However, the majority of neighborhoods are missing income information for fewer than two men or women (90.6% of neighborhoods are missing income for two or fewer men and 69.5% of neighborhoods are missing income for two or fewer women). Those missing on income are significantly more likely to be older and female, but are similar on key variables, including educational attainment, marital status, race, and employment status, as well as many study outcomes, such as informal and formal social control, general neighboring, well-being, and social ties.

Well-Being. Resident's health and psychological well-being is important since it has the potential to influence residents' skills and abilities at work and at home, in addition to contributing to neighborhood interactions, withdrawal, anxiety, and the routine activities of residents. A three-item scale (α=.71) of resident well-being includes responses to: "In general," 1) "…how energetic have you felt lately" (.80), 2) "…how has your health been lately" (.83), and 3) "…how have your spirits been lately?" (.77).[10] Responses range from "1" to "4," with "4" reflecting the most energy and "very good" health or spirits. The average of all three responses was taken for each respondent when at least two valid responses were given. This measure was then aggregated to the neighborhood-level by gender by summing the individual scores separately for men and women and dividing each by the total number of men and women, respectively, within each neighborhood.

Property Victimization is included since victimization experiences have been shown to be associated with a decline in mental health and well-being (see Adams and Serpe, 2000), affecting residents' human capital. Property victimization was coded "1" if the respondent reported either a burglary to their home or auto theft of their car or a household member's car within the last year when at least one of these items was valid. The average proportion of men and women who reported being the victim of a property crime was then calculated for each neighborhood to serve as the aggregated measure.

Unsafe Neighborhood. Similar to property victimization, perceptions that the neighborhood is unsafe also can contribute to fear and a decline in mental health (Skogan, 1986; Skogan and Maxfield, 1981). This construct is captured by items tapping

[10]A principal components analysis revealed that all three items load on one factor and factor loadings are indicated in parentheses.

feelings of uneasiness and insecurity about living in the neighborhood. Unsafe neighborhood is a multi-dimensional four-item scale (α=.84)[11] that combines responses to: "How safe would you feel being out alone in your neighborhood" 1) "…during the day" and 2) "…at night?" and "If you were out alone at night in your neighborhood, around the corner from your block, would you" 3) "…be afraid if a stranger stopped you to ask for directions" and 4) "…feel uneasy if you heard footsteps behind you?"[12] Response sets for the first two questions ("very safe"= "1," "somewhat safe"= "2," "somewhat unsafe"= "3," and "very unsafe"= "4") were collapsed to match the latter two questions so that "very unsafe" and "somewhat unsafe" were coded "1" and all other responses were coded "0." For the latter two questions, "yes" responses were coded "1" and "no" responses coded "0." The mean of all four responses when at least two responses were valid was calculated for each respondent. This measure was then aggregated to the neighborhood-level by gender by summing the individual scores separately for men and women and dividing each by the total number of men and women, respectively, within each neighborhood.

Social Capital

Marriage is a single item, coded "1" for respondents who reported their marital status as legally "married" or "living with someone as though you were married." All other responses ("widowed," "divorced or separated," and "never been married") were

[11]The alpha reliability score for unsafe neighborhood was calculated using estimations of tetrachoric correlations, which are preferred for dichotomous items (Lorenzo-Seva and Ferrando, 2012; Uebersax, 2006).

[12]After recoding, a principal components analysis using varimax rotation revealed that the four included items loaded on two separate factors. The first factor included feeling unsafe in the neighborhood during the day (.89) and at night (.71) and the second factor included feeling afraid if a stranger were to ask for directions (.82) and if one heard footsteps behind them (.84) at night. Factor loadings are noted in parentheses.

coded "0." The individual-level measure was also aggregated to the neighborhood-level by calculating the average for men and women in each neighborhood.

Social Ties sums the number of friends and relatives reported to be living within the respondent's neighborhood. This item is aggregated to the neighborhood-level by averaging the total number of reported friends and relatives for men and women within each neighborhood.

General Neighboring is a four-item scale (α=.78)[13] that captures the degree to which residents are engaged or involved with their neighbors. Respondents were asked: "During the past year have you:" 1) "visited inside a neighbor's house on your block," 2) "run a shopping errand for a neighbor on your block," 3) "borrowed tools or household items from a neighbor on your block," and 4) "worked together with other neighbors on your block to improve its appearance?" Responses were coded "1" for "yes" and "0" for "no" and the mean of all four items was calculated for each respondent when at least three items were valid. This measure was also aggregated by averaging the individual scores within each neighborhood separately for men and women.

Defensive Neighboring is a three-item scale (α=.86)[14] that includes responses to the following; 1) "Have you kept watch on a house or apartment while a neighbor was away, or has a neighbor done this for you?," 2) "Have you arranged with other people in your neighborhood to have newspapers or mail brought in while you or they were away?," and 3) "Have you given another person in your neighborhood your key, or have

[13]The alpha reliability score for general neighboring was calculated using estimations of tetrachoric correlations, which are preferred for dichotomous items (Lorenzo-Seva and Ferrando, 2012; Uebersax, 2006).
[14]The alpha reliability score for defensive neighboring was calculated using estimations of tetrachoric correlations, which are preferred for dichotomous items (Lorenzo-Seva and Ferrando, 2012; Uebersax, 2006).

they given you theirs, so that animals could be fed, plants watered, or the house checked on while you or they were away?" Responses to each item were either "yes" ("1") or "no" ("0") and the mean was taken for each respondent before aggregating to the neighborhood-level by calculating the average response in each neighborhood separately for men and women.

Community Solidarity is a seven-item scale (α =.83), assessing feelings of neighborhood attachment and closeness among neighbors. It includes responses to the following: "How much do you feel a sense of community with other people" 1) "…in your neighborhood" (.71) and 2) "…on your block? That is, how much do you share their interests and concerns?" (.77), "How attached do you feel" 3) "…to your neighborhood" (.70) and 4) "…to the block you are living on now?" (.74), and "On your block" 5) "…to what extent do you rely on your neighbors for emotional support" (.63), 6) "…how many people do you know by face or name" (.70), and 7) "…to what extent do you feel accepted by your neighbors?" (.70).[15] Responses to the first two items include "not at all" ("1"), "somewhat" ("2"), and "a great deal" ("3"). These responses were multiplied by 1.33 so that they could be more easily numerically combined with the remaining questions response set of: "not at all" ("1"), "small extent" ("2"), "medium extent" ("3"), and "large extent" ("4"). The resulting items were averaged across respondents and then aggregated to the neighborhood-level by calculating the average among men and women for each neighborhood.

Presence of Voluntary Associations is captured in residents' reported knowledge of neighborhood associations or organizations that are located within their neighborhood.

[15]Principal components analysis (after recoding) revealed that all items loaded on a single factor and factor loadings are noted in parentheses.

The survey lists nine neighborhood groups, including neighborhood associations, church or synagogue connected groups, parent-teacher associations, youth groups (e.g., boy or girl scouts), community or recreation center organizations, political clubs or issue-oriented groups, block clubs, social groups or clubs, and "other" neighborhood-level organizations, and asks if any are located within the respondents' neighborhood. The number of associations that each respondent reported as located within their neighborhood was summed and then aggregated to the neighborhood-level by calculating the average number of neighborhood groups reported among men and women for each neighborhood.[16]

INDEPENDENT VARIABLES

Coercive Mobility

Change in Prison Admission Rates at the neighborhood-level from 1992-1994 is the first measure of coercive mobility. This measure was calculated using the same method used by Lynch and Sabol in prior work (2004a; 2004b; Lynch et al., 2002). The number of persons admitted to prison in 1994 was divided by the proportion of the population at risk for incarceration (ages 18 to 34) and subtracted from the same rate calculated for 1992 before being multiplied by 1,000.

Change in Prison Release Rates at the neighborhood-level from 1992-1994, a second measure of coercive mobility, is calculated in the same way. The number of persons released from prison in 1994 was divided by the proportion of the population at

[16]This item was chosen over a similar item, which asked, of the nine included neighborhood associations, "Are you or is anyone in your household a member?" This item was not selected due to a large amount of missing data (11.6%). However, the sum of household memberships in neighborhood associations is significantly correlated (r=.57, $p < .05$) with the selected measure (presence of voluntary associations).

risk for incarceration (ages 18-34) and subtracted from the same rate calculated for 1992 before being multiplied by 1,000.[17]

The restrictive denominator of ages 18-34, intended to capture those "at risk" for incarceration, was chosen to calculate both measures since most admissions, and therefore releases, to prison are young people. More specifically, in 1994, 71.4% of new court commitments to state prisons were between the ages of 18 and 34, according to the Bureau of Justice Statistics (2011).

The change in rates from 1992-1994 is used to operationalize coercive mobility since the theory aims to understand how the cumulative number of persons experiencing the cycling of prison affects the individual and community. A single or averaged rate of prison admissions or releases would not be capable of capturing the cumulative effects theorized to have a coercive community impact (Lynch et al., 2002). Although single rates of admissions and releases have been shown to be related to crime (Clear et al., 2003), cumulative concentrations of incarceration are likely the best measure for capturing effects to individuals, as well as community organization and informal social control. As Clear and colleagues (2003) note, even high incarceration neighborhoods may only experience a 2-3% removal or return rate per year. However, over several years this rate results in a "pattern of disruption overtime" that is capable of damaging community networks and informal social control (Clear et al., 2003: 39).

[17]A limitation of the correctional data is that some cases are missing address information, resulting in incompleteness. Lynch and colleagues' (2002) original comparison between data received from the Maryland Department of Public Safety and Corrections (MDPSC) (at the census tract level with address information) and county-level estimates revealed that admissions and release data are underreported by about one-third. However, this underrepresentation is believed to be spread evenly throughout communities, and therefore, should only affect the magnitude of incarceration and not the distribution of rates across communities (Lynch et al., 2002).

Finally, since the admission of residents to prison and their return home are likely to have differential effects to community organization and informal social control, the measures are left separate instead of attempting to combine them into a single measure of coercive mobility. The separation of measures into prison admissions and releases is typical, following research in this area (Clear et al., 2003; Lynch and Sabol, 2004a; 2004b; Lynch et al., 2002).

Neighborhood Structure

Two variables are intended to capture the neighborhood structural characteristics included within the systemic reformation of social disorganization and coercive mobility theory. They are residential mobility and concentrated disadvantage, which includes racial composition and poverty.

Residential Mobility is a two-item scale (α=.73),[18] constructed by averaging the standardized z-scores for the 1990 census proportions of residents who lived in a different house in 1985 (e.g., 5 years before the survey) than at the time of the survey and who rent their homes or apartments.[19] Residential mobility ranges from -1.64 to 2.58 (mean=0; sd=0.87).

Concentrated Disadvantage is a standardized five-item scale (α=.86)[20] that includes 1990 census items that are supported in the literature on social disorganization theory. Following the tradition of neighborhood scholars (see for example Morenoff, Sampson, and Raudenbush, 2001), concentrated disadvantage was created by averaging

[18]Alpha based on standardized items.
[19]A principal components analysis showed that both items load on a single factor (both loadings=.89).
[20]Alpha based on standardized items.

the standardized z-scores for each included item:[21] the proportion of residents who are 25 and over with less than a high school education (.74), the proportion of residents living in poverty (.78), the proportion of residents who identify as black (.61), the proportion of residents receiving government assistance (.94), and the proportion of single-headed households (.94).[22] Concentrated disadvantage ranges from -1.15 to 1.88 (mean=0; sd=0.80) across neighborhoods.

Individual-level Controls

Several variables are included as controls at the individual-level since they are likely to impact respondents' forms of capital and perspective on the social control efforts of their neighbors. *Age* includes each respondent's age at the time of the interview (mean=51.59; sd=16.52; range=20, 94). *Race* was coded "1" if the respondent identified as "black" (33.0%) and "0" if they identified as "white" (60.4%) or "other." *Homeowner* was coded "1" if the respondent indicated that they owned their home (75.1%) and "0" if they did not. *Presence of Children* (age 18 and under) living within the home is included since many of the theoretical components within the proposed gendered theory of coercive mobility rely on the presence of children contributing to the additional challenges that women face. Those who reported any minor children under the age of 18 living within the home were coded "1" and those with no children were coded "0." Overall, 27.6% of respondents (20.4% of men and 32.2% of women) reported living with minor children at the time of the interview.

[21]This method is preferred since it considers each included variable within the combined score equally so that scores reflect "true" differences among variables. Other methods (e.g., factor scores) weight each included variable, making scores less directly interpretable (see DiStefano, Zhu, and Mîndrilă, 2009).
[22]A principal components analysis showed that each of the included items load on a single factor. Factor loadings are indicated in parentheses.

MISSING DATA

NEIGHBORHOOD-LEVEL

Two neighborhoods were missing a 1994 prison release rate, one neighborhood was missing a 1992 admission rate, and one neighborhood was missing a 1994 admission rate needed to calculate the change in admission rates for these years. Therefore, before proceeding with the analysis, these missing rates were estimated, using OLS regression, in order to retain the full sample of neighborhoods. Several neighborhood level predictors, as well as alternative years of admission and release rates, were included in the imputation models in order to accurately and informatively estimate the missing admission and release rates used to calculate the final change in rates. A number of models were tested and models that produced predicted values closest to and most highly correlated with non-missing values were chosen as imputed values for the missing points.[23] From the imputed single year rates, change rates of prison admission and release rates were calculated similarly to the rest of the data. No other variables are missing data at the neighborhood-level.

INDIVIDUAL-LEVEL

All key variables, with the exception of income, are missing fewer than five percent of cases (ranging from 0% to 4.1% missing). For these measures, mean imputation was utilized to estimate the missing data in order to retain the largest number of possible cases. Since income is missing 12.2% of cases, and the only available

[23]In order to estimate the two missing 1994 prison release rates, concentrated disadvantage, the proportion of black residents, crime, and prison admissions in 1994 and releases in 1992 were used as predictors. To estimate the missing 1994 admission rate, concentrated disadvantage, the proportion of black residents, crime, and prison admissions in 1992 and releases in 1994 were used as predictors. Finally, to estimate the missing 1992 admission rate, concentrated disadvantage, the proportion of black residents, and prison admissions in 1994 and 1987, and releases in 1994 were used as predictors. The predicted rates are highly correlated with the actual rates (correlations range from .88 to .96, $p<.001$).

demographic information to estimate income using a regression strategy includes other variables of interest (e.g. education, not in workforce), cases missing on this variable will be dropped for the models estimating income, resulting in 618 respondents (87.8% of the full sample).

The number of years of schooling completed was mean imputed prior to dichotomizing this measure to high school/GED completion for the 13 individuals (1.8%) who are missing. However, mean imputation could not be used for several dichotomous items, including not in the workforce (2.3% missing), property victimization (1.1% missing), marriage (0.9% missing), reprimanding neighborhood children (0.6% missing), and presence of children (0.5% missing) since imputation of a decimal would be conceptually meaningless for these items. Therefore, these individual-level models will include 688 to 700 cases (97.7%-99.4% of the full sample). Only the presence of children (0.5%) precludes retention of the full sample for all models since it is included as a control, resulting in retention of 99.4% of the full sample (n=700) at the individual-level.

RULING OUT POSSIBLE AGGREGATION BIAS WITHIN THE NEIGHBORHOOD-LEVEL ANALYSIS

Although each neighborhood contains a substantial number of individuals (18-24) for the purposes of creating aggregated measures (see Blakely and Woodward, 2000), the number of available responses becomes more limited when separated by gender. The aggregated responses for women are still based on a substantial eight to twenty-three respondents. However, given the tendency of neighborhood surveys to receive more compliance from women respondents compared to men (Curtin, Presser, and Singer, 2000; Moore and Tarnai, 2002; Singer, van Hoewyk, and Maher, 2000) (and this sample

is no exception, being comprised of 60.9% women), the range of aggregated responses of men is two to sixteen per neighborhood.

Bias may arise if cohesiveness of individual-level responses is lacking (Blakely and Woodward, 2000), an issue that is more probable given fewer randomly selected respondents. The more heterogeneity among responses, the greater amount of measurement error exists within aggregated constructs since these measures are based on the average or another arithmetic computation of individual items (Diez Roux, 2004). Therefore, heterogeneity on key variables was examined among males residing in low male respondent neighborhoods (those with five or fewer male respondents). Within all three low male respondent neighborhoods, responses exhibited considerable overlap on key variables, including general and defensive neighboring, informal social control, social ties, and reprimanding neighborhood children, indicating agreement among respondents. In addition, the relationship between low male respondent neighborhoods and high rates of prison admissions or low male neighborhood populations (based on the 1990 U.S. census) was examined, which revealed no major differences among these neighborhoods and the rest of the sample. Low male respondent neighborhoods fit within the normal range of prison admission rates for 1992 and 1994 and do not reflect outliers or even the highest prison admission rates within the data.[24] Furthermore, as part of the

[24]One low male respondent neighborhood has the highest *change* in admissions from 1992-1994 (7.24), despite having below average admission rates for both years (5.57 in 1992 and 12.81 in 1994). However, this neighborhoods' change in prison release rates from 1992-1994 is below average (-2.79). None of the three low male respondent neighborhoods feature a low proportion of males based on U.S. census data (ranges from 45-46% male for "low male respondent neighborhoods"), however this data is based on the 1990 decennial census (before the 1992-1994 prison admission rates).

analyses, models excluding low male respondent neighborhoods will be compared to models including the full sample of neighborhoods.[25]

Having outlined the data and measures included in the proposed study, including strategies for overcoming missing data challenges, the next chapter details the analytic strategy. Specifically, Chapter Four describes how the data will be used to estimate the impact of incarceration to women and men, as well as the potential gendered consequences of incarceration at both the neighborhood and individual-level.

[25]Analyses excluding neighborhoods with five or less men produced identical substantive results in 90% of models (27 out of 30). These findings are reported in Appendix A.

CHAPTER FOUR: ANALYTIC METHODS

The analytic strategy aims to test the complete gendered theory of coercive mobility. In order to test the theory, the effects of incarceration at both the neighborhood and individual-level must be estimated. An investigation at both levels will reveal which aggregated finding is the result of an accumulation of individual-level findings (indirect neighborhood-level effects) and which occur solely at the neighborhood-level (direct neighborhood-level effects). In addition, an important part of the analysis is the potential mediation of forms of capital (physical, human, and social) in the relationship between incarceration and social control at each level of analysis. This part of the analysis will reveal how women's and men's aggregated capital may build to influence the neighborhood's ability to police themselves and prevent crime by engaging in social control, including informal social control (e.g., stopping a behavior themselves or by engaging another neighbor's help; reprimanding neighborhood children) and initiating formal social control (e.g., calling the police), as well as how neighborhood-level forms of capital may feedback to impact individual-level social control efforts.

DESCRIPTIVES AND BIVARIATE RELATIONSHIPS

The analysis begins with an examination of descriptive statistics and the bivariate relationships among study variables at the neighborhood and individual-level. Following a descriptive and bivariate analysis, the study will proceed with the main analyses.

EXAMINING DESCRIPTIVES RELATED TO ENDOGENEITY

An important part of the descriptive analysis is examination of the change in prison admissions and change in prison releases from 1992-1994. Since endogeneity, a statistical problem in which incorrect causal ordering or other modeling issues contribute

to correlation between an independent variable and an error term, is a potential issue with the present study, as it is with all cross-sectional neighborhood-level analyses, a consideration must be given to the possibility that the included variables are contributing to each other in reverse causal order (i.e., Y is actually contributing to X, or in this case, forms of capital and social control are contributing to prison admissions and releases). It is crucial that the changes in incarceration rates represent distinct trends that are not just extensions of previous or subsequent years in order to support the argument that X is affecting Y and diminish the possibility that Y is actually influencing a similar and subsequent trend in X. Further evidence for correct causal ordering would be to estimate and rule out the effect of Y on X. However, corresponding years of incarceration rates are not available to test this hypothesis with these data. Since this issue cannot be ruled out with future years of incarceration data, the analysis of prison admission rates and release rates, as well as the inclusion of a control for prior crime (1990-1992) assists in substantiating the correct causal ordering of variables.

MULTIVARIATE ANALYSIS

The main analysis examines the multivariate relationships among included variables by investigating each of the proposed research questions (separately for prison admissions and releases) in two stages; neighborhood-level and individual-level analyses.

NEIGHBORHOOD-LEVEL

Beginning with step one, the effects of incarceration at the neighborhood-level are estimated using ordinary least squares (OLS) regression since all outcomes at this level are continuous and normally distributed. Specifically, the direct relationships among prison admissions and releases and social control (informal, reprimanding neighborhood

children, and formal) and prison admissions and releases and each potential mediator (physical, human, and social capital) are estimated separately for women and men to determine which relationships, if any, are significant (i.e., significantly different from zero). Following the estimation of relationships for both women and men, a gendered analysis will determine which relationships are significantly different for women and men (i.e., the associations between incarceration and women's forms of capital and social control are significantly different from the associations between incarceration and men's forms of capital and social control).

Since the number of included neighborhoods is limited (n=30), the main models include only the three main independent variables (either prison admissions or releases, along with indicators of neighborhood structure). In addition, due to the limited power available in models with this sample size, significance for all results is interpreted at the relaxed $p < .10$ level (see, for example, Warner, 2007).

Following the estimation of the direct effects of incarceration on women's and men's forms of capital and social control, an equality of coefficients test is employed, comparing the coefficients for women to the coefficients for men to determine if effects are significantly different from one and other and therefore, significantly gendered. Following the work of Paternoster, Brame, Mazerolle, and Piquero (1998; see also, Brame, Paternoster, Mazerolle, and Piquero, 1998), the z-score for the difference between the two coefficients of admissions or releases is calculated using an unbiased estimate of the standard deviation of the sampling distribution to determine if gendered differences are significant. More specifically, the equation referred to throughout as the Clogg test (see Paternoster et al., 1998; Clogg, Petkova, and Haritou, 1995), written as:

$$z = (b_1 - b_2)/ \sqrt{(SEb_1^2 + SEb_2^2)}$$

where b_1 and SEb_1 represent the coefficient of the variable of interest and standard error for women, respectively, and b_2 and SEb_2 represent the coefficient and standard error for men, respectively, is employed.[26]

Mediation Analysis

After estimating the direct relationships between incarceration (for both prison admissions and releases) and each dependent variable, and estimating the direct relationships between incarceration (for both prison admissions and releases) and each potential mediator for women and men, the analysis proceeds with a proxy test of mediation among these variables at the neighborhood-level. The included mediation test is considered a proxy due to the absence of complete sequential ordering of included variables, namely that the mediators and outcomes are both captured within the 1994 survey. Although this limitation reduces the establishment of precise causal ordering among potential mediators, it is used to estimate the potential for mediation to inform future research. In fact, "most empirical tests of mediation utilize cross-sectional data despite the fact that mediation consists of causal processes that unfold overtime" and although three time points is ideal, two time points— which are available in the present study— may be adequate for testing mediation (Maxwell and Cole, 2003: 1; Cole and Maxwell, 2003). Thus, this dissertation continues to use the language of mediation with the understanding that not all mediation criteria can be established with these data.

[26]At the neighborhood-level the Clogg test n=60 (30 aggregations of women and 30 aggregations of men). Sufficient sample size is necessary in order to avoid violating the assumption of a normal distribution required by the Clogg test. Although no objective *n* has been established among scholars, the Clogg test has been used to investigate relationships using similarly-sized samples at both the neighborhood (Warner, 2003; n=66) and city levels (Pyrooz, 2013; n=88). Still, caution should be applied with the interpretation of these results.

To begin, Baron and Kenny's (1986) criteria for testing mediation is used to establish which variables require further testing. According to their criteria and shown in Figure 5, the following requirements must be met by potential mediators:

[Figure 5 about here]

1) The independent variable has a significant direct association with the dependent variable. In this case, the change in prison admissions or releases must be significantly related to one of the three forms of social control (informal, reprimanding neighborhood children, formal) (Figure 5, path #1).
2) The independent variable (change in prison admissions or releases) must be significantly related to the potential mediator (forms of capital) (Figure 5, path #2).
3) The potential mediator (forms of capital) must be related to the dependent variable (social control) (Figure 5, path #3).
4) The mediator must reduce the coefficient of the independent variable (change in prison admissions or releases) once it is entered into the model.

After determining which potential mediators meet the above criteria, each is further examined to determine whether the reduction experienced by the independent variable due to each potential mediator (criterion 4) is in fact significant. The present study relies on the bootstrapping method, which is a nonparametric approach that makes no assumptions about the shape of the distributions of the variables or the sampling distribution of the statistic, making it ideal for small samples (Preacher and Hayes, 2004; Shrout and Bolger, 2002). Bootstrapping uses sampling with replacement to generate a large number of samples the size of the original sample and computes the indirect effect of the independent variable on the dependent variable for each of these computer-generated samples (Preacher and Hayes, 2004; Shrout and Bolger, 2002). The test sorts 1,000 estimates of the indirect effect from low to high. A confidence interval of 90% is used given the sample size of the present study (n=30). Therefore, the lower limit of the confidence interval is defined as the 5th percentile score in this sorted distribution, and

the upper limit is defined as the 95th percentile score in the distribution (5% on both tails) (Preacher and Hayes, 2004). When zero does not fall within the 90% confidence interval, it can be concluded that the indirect effect is indeed significantly different from zero at $p<.10$ (two-tailed), meaning that the mediation is significant.[27] Furthermore, although the mediation analysis does not specifically test for a gendered effect with the use of significance testing, such as the Clogg test for direct effects, women's and men's significant mediators will be compared in terms of the number of significant domains for each, indicating whether women's or men's forms of capital better explain the relationship between incarceration and social control.

INDIVIDUAL-LEVEL

The second stage of the analysis involves the examination of the individual-level effects of incarceration, while controlling for neighborhood-level characteristics. First, separate effects for women and men are estimated, followed by a comparison of differences or gendered effects among women and men. The purpose of the individual-analysis is to demonstrate how individual residents are impacted by incarceration, as well as to establish which neighborhood-level effects occur due to the accumulation of individual-level effects. In addition, the individual-level analyses can determine whether neighborhood-level effects "feedback" at the individual-level with the use of a mediation analysis. All analyses at this stage are conducted using Hierarchical Linear Modeling software (HLM, v.7.0) (Raudenbush, Bryk, Cheong, and Congdon, 2004) since data are nested, such that individuals are clustered within neighborhoods. Multi-level modeling techniques are used since they avoid violation of independent error terms across

[27]Bootstrapping is used in place of the Sobel (1982) test, a commonly used *z*-test, used for testing mediation in large samples, which compares the strength of the indirect effect of the independent variable on the dependent variable to the point that it equals zero.

neighborhood levels (Raudenbush and Bryk, 2002). Multi-level modeling allows for the estimation of the effects of level-one units, entities within a grouping, and level-two units, referring to the variation across units, simultaneously. Within the present study, the level-one units are individuals and level-two units are the neighborhoods in which they reside.

The main multi-level models control for age, race, homeownership, and the presence of children within the household at the individual-level and concentrated disadvantage and residential mobility at the neighborhood-level. Within HLM, several centering choices for independent variables are available, which allow for various interpretations of the coefficients. In the present study all continuous variables are grand-mean centered so that the coefficients may be interpreted as the neighborhood average and binary variables are left uncentered. The majority of individual-level outcomes are continuous and are estimated with linear models. For example, the level-one equation estimating women's or men's social ties, a measure of social capital, as the dependent variable can be written as follows:

$$SocialTies_{ij} = \beta_{0j} + \beta_{1j}(Age_{ij}) + \beta_{2j}(Race_{ij}) + \beta_{3j}(Homeowner_{ij}) + \beta_{4j}(Children_{ij}) + r_{ij} \quad (1a)$$

where $SocialTies_{ij}$ is equal to the number of social ties for person i in neighborhood j and β_{0j} is the mean level of social ties in neighborhood j, controlling for age, race, homeownership, and the presence of children. The model error is r_{ij}.

Several individual-level outcomes are dichotomous (e.g., high school completion, not in workforce, property victimization, marriage, and reprimanding neighborhood children) and are estimated within an over-dispersed Bernoulli model.[28] In these models,

[28]The over-dispersed Bernoulli model corrects for both over-dispersion (inflated "0's") and under-dispersion (inflated "1's"), the latter of which is the issue with these data.

the probability that person *i* in neighborhood *j* completed high school or received their GED, for example, is defined as ϕ_{ij} = Pr($HighSchoolCompletion_{ij}$=1). Within the level-one equation for this outcome, ϕ_{ij} is modeled using a logit link function and can be written as:

$$\log[\phi_{ij}/(1 - \phi_{ij})] = \eta_{ij} \quad (1b)$$

$$\eta_{ij} = \beta_{0j} + \beta_{1j}(Age_{ij}) + \beta_{2j}(Race_{ij}) + \beta_{3j}(Homeowner_{ij}) + \beta_{4j}(Children_{ij}) + r_{ij}$$

where η_{ij} is the natural logarithm of the odds (i.e., log-odds) that individual *i* in neighborhood *j* completed high school or received their GED and β_{0j} is the mean level of high school completion in neighborhood *j*, controlling for age, race, homeownership, and the presence of children. At level two, the change in prison admissions/releases from 1992-1994, as well as residential mobility and concentrated disadvantage, are included in the main models. Therefore, the level-two equation for both continuous and dichotomous outcome types is:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(Incarceration_j) + \gamma_{02}(Mobility_j) + \gamma_{03}(Disadvantage_j) + u_{0j} \quad (1c)$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

where β_{0j} is the distributive effects in neighborhood *j*, equal to the effects of neighborhood characteristics on the distribution of outcomes within neighborhood *j* plus the unique effect associated with neighborhood *j*. Each variable at level-one becomes an outcome at level-two ($\gamma_{10\text{-}40}$).

As with the neighborhood-level analyses, an equality of coefficients test is employed in order to compare the effects for women and men and determine if they are

significantly gendered. The Clogg test (Paternoster et al., 1998; Brame et al., 1998) is also used at the individual-level. However, models estimating a dichotomous outcome are unfit for the Clogg test and therefore, a separate model containing the cross-level interaction term gender*incarceration is estimated in place of the Clogg test.

Mediation Analysis

After estimating the direct individual-level effects of incarceration, the analysis moves on to a preliminary mediation analysis similar to that conducted at the neighborhood-level. Using multi-level mediation, this part of the analysis seeks to determine if neighborhood-level forms of capital mediate the relationship between incarceration and individual-level social controls. In other words, do the effects to neighborhood-level phenomenon "feedback" onto residents at the individual-level?

The steps for estimating incarceration's direct effect on individual-level forms of social control (criterion 1) and neighborhood-level forms of capital (criterion 2) have already been discussed. Therefore, the next step in the multi-level mediation analysis is to assess criterion three of Baron and Kenny's (1986) requirements, testing whether there is a significant direct relationship among the potential neighborhood-level mediator and the significant individual-level social control outcomes. These relationships can more clearly be seen in Figure 5.

When a potential neighborhood-level mediator, for example, the proportion of men not in the workforce, is added to the model the components of the level-one equation remain unchanged. For example, the following is the level-one mediation equation estimating informal social control:[29]

[29]Centering choices remain the same as in previous models (e.g., all continuous variables are grand-mean centered and binary variables are left uncentered).

$$InformalSocialControl_{ij} = \beta_{0j} + \beta_{1j}(Age_{ij}) + \beta_{2j}(Race_{ij}) + \beta_{3j}(Homeowner_{ij}) + \beta_{4j}(Children_{ij}) + r_{ij} \quad (2a)$$

The level-two equation for informal and formal social control can be written as:[30]

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(MalesNotInWorkforce_j) + u_{0j} \quad (2b)$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

Step four of the mediation analysis proceeds with all potential neighborhood-level mediators meeting criteria one through three to test whether the addition of a potential mediator reduces the coefficient for incarceration. Again, the level-one equation remains unchanged and

the level-two equation becomes:[31]

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(Incarceration_j) + \gamma_{02}(Mobility_j) + \gamma_{03}(Disadvantage_j) + \gamma_{04}(MalesNotInWorkforce_j) + u_{0j} \quad (3a)$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

Significant coefficients for incarceration within models estimating its direct effect on women's and men's forms of social control (see equations 1a and 1c for continuous outcomes and 1b and 1c for dichotomous outcomes) are compared with the coefficient for incarceration resulting from models including potential mediators (see equations 2a and 3a for continuous outcomes; see footnote 31 for dichotomous outcomes). The

[30]For the dichotomous variable, reprimanding neighborhood children, the level-one equation is the same as equation 1b and ϕ_{ij} is defined as $\Pr(ReprimandingChildren_{ij}=1)$, the probability that that person *i* in neighborhood *j* will reprimand neighborhood children who were misbehaving. The level-two equation for this outcome is $B_{0j} = \gamma_{00} + \gamma_{01}(MalesNotInWorkforce_j) + u_{0j}$, $\beta_{1j} = \gamma_{10+} u_1$, $\beta_{2j} = \gamma_{20+} u_2$, $\beta_{3j} = \gamma_{30+} u_3$, $\beta_{4j} = \gamma_{40+} u_4$.

[31] For the dichotomous variable, reprimanding neighborhood children, error terms are included so that the level-two equation is $\beta_{0j} = \gamma_{00} + \gamma_{01}(Incarceration_j) + \gamma_{02}(Mobility_j) + \gamma_{03}(Disadvantage_j) + \gamma_{04}(MalesNotInWorkforce_j) + u_{0j}$, $\beta_{1j} = \gamma_{10+} u_1$, $\beta_{2j} = \gamma_{20+} u_2$, $\beta_{3j} = \gamma_{30+} u_3$, $\beta_{4j} = \gamma_{40+} u_4$.

potential mediators which resulted in a reduction in the coefficient for incarceration once entered into the model are then further examined.

Bootstrapping, the mediation method used at the neighborhood-level, is not feasible for use with multi-level models with small samples since models may randomly generate a constant variable, preventing convergence (Preacher and Selig, 2012). Therefore, in order to test whether the reductions in the coefficient for incarceration due to potential mediators are in fact significant, quasi-Bayesian Monte Carlo confidence intervals are estimated. The quasi-Bayesian Monte Carlo method generates sample statistics from their combined asymptotic distribution, instead of resampling or generating data as in the bootstrapping method used in the neighborhood-level analysis. The advantage of quasi-Bayesian Monte Carlo confidence intervals for multi-level mediation is that the model needs to fit the data only once.[32] The advantages of quasi-Bayesian Monte Carlo confidence intervals include most of those associated with bootstrapping (e.g., asymmetry) (Preacher and Selig, 2012), making it the ideal method for mediation testing at this level.

The Monte Carlo method generates a sample distribution from a combined statistic using estimates from component statistics and an asymptotic covariance matrix. As in the neighborhood-level mediation analysis, 1,000 random selections of point estimates and asymptotic variances for the means are taken to estimate a sampling distribution. Confidence intervals can then be formed from this sampling distribution just as with bootstrap intervals. Ninety percent confidence intervals will be used to conclude whether the mediated portion of the effect is indeed significantly different from zero

[32]The quasi-Bayesian Monte Carlo method is not used at the neighborhood-level since convergence is not an issue at this level and since bootstrapping offers the additional advantage of resampling the data to create computer-generate samples and estimates of the indirect effect.

(zero does not fall within the confidence interval) at p<.10 (two-tailed), meaning that the mediation is significant. As with the individual-level analysis, the number of significant mediators found for women and men will be compared in order to determine which offers more domains capable of explaining the relationship between incarceration and social control.

INCLUSION OF ADDITIONAL CONTROLS

Additional models, including controls for the *neighborhood crime rate* and *neighborhood population* are also estimated in order to verify the reliability of the results. Neighborhood crime rate, in particular, is an important control in establishing causal ordering. Additionally, *lack of police response* is added to models estimating each form of social control.[33]

Neighborhood Crime Rate per 100 residents is included as a control since it is related to key study variables (e.g., level of incarceration, neighborhood structure, social control, forms of capital). The total crime rate for each neighborhood was calculated by averaging the rates for violent crime (including homicide, rape, robbery, aggravated assault) and property crime (including larceny, burglary, and motor vehicle theft) across three years (1990-1992).[34] The total crime rate ranges from 2.61 to 41.69 crimes per 100 residents (mean=11.91) within each neighborhood.

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[33]*Fear of retaliation* was considered as an additional control since it has been found to influence whether or not adults intervene to stop unwanted behaviors (Wilkinson, 2007). This measure was not included due to a large amount of missing data (19.9%), however, it is significantly correlated (r=.47, p< .05) with the included concentrated disadvantage. Fear of retaliation includes respondents' responses to the question, "Do you think… these teenagers would hurt your neighbor, damage his or her property, or anything like that" (if they tried to intervene in their making noise at night)? "Yes" responses were coded "1" and the proportion of residents who felt that teens would retaliate was calculated for each neighborhood. On average, 59% of residents feel that teens would retaliate in some way if neighbors asked them to stop making noise late at night.

[34]Total crime rate was selected since both violent and property crime have been shown to affect neighborhood social control (Miethe, 1995; Skogan, 1986). Similar results were achieved when property crime or violent crime was included separately.

The inclusion of prior neighborhood crime is helpful in establishing causal ordering and ruling out the issue of endogeneity. Since prior crime (1990-1992) serves as a proxy for prior measures of social capital and social control (which are not included in the data), the inclusion of prior crime (1990-1992) helps to rule out the possibility that previous measures of social capital and social control are not causally related to the changes in prison admission and release rates (1992-1994), but establishes that changes in admission and release rates (1992-1994) are indeed causally related to subsequent measures of social capital and social control (1994), as hypothesized. Support is drawn for the latter position if the relationship between changes in prison admission and release rates (1992-1994) and social capital and social control (1994) remains significant, while controlling for prior crime (1990-1992).

Neighborhood Population relative to 1,000 residents is also included as a control since it is likely to impact community organization, informal social control, and other key variables. These variables could simply be a function of neighborhood size. The number of residents may restrict the degree of interaction among neighbors. On the other hand, larger neighborhood populations may reduce the opportunity for neighbors to get to know one another on more intimate levels and could also reduce neighboring and participation in informal social control (Wirth, 1938).

Lack of Police Response is included since it is likely to interfere with resident's perceptions of formal social control and may also interfere with informal social control[35] (e.g., contribute to withdrawal from network immersion due to a lack of trust in police to respond; contribute to a greater reliance on informal controls). This two-item scale (α

[35]Among the full sample, the lack of police response at the neighborhood-level is significantly related to residents' individual-level reprimanding of neighborhood children within a nested HLM model (OR=234.40, $p<.05$), as well as residents' neighborhood-level reprimanding of neighborhood children within an OLS model ($r= 1.28$, se= 0.81, $p<.10$). Lack of police response at the neighborhood-level is not significantly related to informal or formal social control at the individual or neighborhood-level among the full sample of respondents.

=.92)[36] combines the responses for both scenarios (residential burglary and teens making noise at night). Residents' who indicated that their neighbors would call the police given either scenario (n=636) were asked, "Do you think the police would come and do something about it/the noise?" If respondents answered "no" to either scenario they were coded as "1." "Yes" responses and "Yes, the police would come, but too late to help" were coded as "0" in order to capture the most conservative estimate of the lack of police response. The proportion of residents who did not believe that the police would come in either scenario (of those who said that neighbors would call) was totaled for each neighborhood in order to aggregate it to the neighborhood-level. Missing data at the individual-level is 3.6% and is spread evenly across neighborhoods, ranging from 0 (n= 15) to 5 (n=1). Since mean imputation could not be done given the dichotomous nature of this item, missing individual-level items were dropped and are not captured within the neighborhood-level aggregation. Despite similarity between this measure and the measure of formal social control, these items are not significantly correlated at either the neighborhood (r= -.085) or individual-level (r= -.026).

CONCLUSION

The analytic strategy, investigating the effects of incarceration at both the neighborhood and individual-level, is designed to reveal the entire story of gender and coercive mobility. Furthermore, the analytic plan anticipates and employs strategic safeguards against potential limitations. These include the addition of expanded models in order to account for additional controls, models excluding low male respondent neighborhoods, and regression and imputation strategies aimed at retaining the largest

[36]The alpha reliability score for the lack of police response was calculated using estimations of tetrachoric correlations, which are preferred for dichotomous items (Lorenzo-Seva and Ferrando, 2012; Uebersax, 2006).

possible sample. Utilizing data on Baltimore neighborhoods and with the above considerations in mind, the present study seeks to answer the begging question of how coercive mobility impacts women and men, and how these impacts may be gendered, providing important implications for community social control.

CHAPTER FIVE: NEIGHBORHOOD-LEVEL RESULTS

DESCRIPTIVE STATISTICS

Table 1 describes the sample of women and men on the key variables used in this study, aggregated to the neighborhood-level. On average, significantly fewer women (49.1%) are married in each neighborhood compared to men (58.8%), although there is more variation in the proportion of married men within each neighborhood (6%-100%) compared to women (13%-83%). Contrary to extant literature, on average men have a slightly higher number of reported social ties per neighborhood (8.78) compared to women (7.23), although the difference is not statistically significant. While no significant gender variations exist in the use of any form of social control at the neighborhood-level, more women (49.2%) tend to engage in the reprimanding of neighborhood children in each neighborhood, on average, compared to men (42.7%). Among the full sample, as well as separately for women and men, more variation exists among reprimanding neighborhood children (mean=47.0%, range=0.08 to 0.94) compared to both informal (mean=0.56, sd=0.08) and formal social control strategies (mean=0.95, sd=0.04).

[Table 1 about here]

Also shown in Table 1, the average change in prison admission rates from 1992 to 1994 is -0.02 offenders per 1,000 18-34 year olds, but ranges from a decrease of 16.84 to an increase of 7.24. Shown in Figure 6, half (n=15) of the included neighborhoods experienced a decline in prison admissions during this time and the other half either remained stable (n=3) or increased (n=12). Among declining neighborhoods, the average decline is -3.09 offenders per 1,000 18-34 year olds and the average increase is 3.81 among increasing neighborhoods.

[Figure 6 about here]

Overall, neighborhood release rates increased by an average of 1.68 offenders per 1,000 18-34 year olds from 1992-1994. Shown in Figure 7, a third (n=10) of neighborhoods experienced a decline in prison releases from 1992 to 1994; the average decline being -3.32 offenders per 1,000 18-34 year olds. Over half (53.33%; n=16) of neighborhoods experienced an increase in releases. On average, the increase was 5.79 offenders per 1,000 18-34 year olds. Finally, 13.33% (n=4) of neighborhoods' release rates remained stable during this period.

[Figure 7 about here]

In addition the yearly 1992 and 1994, admission and release rates vary, with admissions ranging from 0 to 51.76 offenders per 1,000 18-34 year olds and releases ranging from 0 to 50.45 offenders per 1,000 18-34 year olds. Variation in admission and release rates is important for several reasons. First, variation means that these data will allow for examination of a range of incarceration rates and associated consequences, expanding the generalizability of results. Second, it means that these data included neighborhoods that are higher in terms of admission and release rates relative to other included neighborhoods. This inclusion allows for an examination of the potential negative consequences posited by coercive mobility theory. Although there is no consensus definition— theoretical or empirical— as to what constitutes a "high incarceration" rate, a study by Renauer and colleagues (2006) provides some insight to further examine if any "high incarceration neighborhoods" capable of producing the effects proposed by coercive mobility theorists exist within these data.

Renauer and colleagues (2006) defined "high incarceration neighborhoods" as having more than 3 prison admissions per 1,000 residents using data on 95 neighborhoods in Portland, Oregon. However, since the rates calculated for the present study use a more conservative at risk age group for the denominator (18-34 year olds) they represent an inflated comparison. On average, 18-34 year olds made up about 30% of the included neighborhood's population in 1990. Therefore, a rough comparison can be done by converting Renauer and colleagues (2006) denominator to adjust for isolation of an at risk population comparable to that of the present study by multiplying it by 30% (1,000 X .30 = 300), so that the new "high" rate represents 3 admissions per 300 18-34 year olds or a rate of about 1%. Using this rough definition, "high" prison admission rates greater than 1% (10 admissions per 1,000 18-34 year olds) with the potential to become "tipping points" are present in 16 neighborhoods in 1992 and 17 neighborhoods in 1994 within the present data. Likewise "high" release rates (over 10 per 1,000 18-34 year olds) are present in 13 neighborhoods in 1992 and 14 in 1994. Therefore, there is potential within these data for an examination of the consequences of "high incarceration neighborhoods."

Finally, the variation present within both the rates themselves and trends in rates is particularly important for establishing the correct causal ordering of the tested variables.

Importantly, both the changes in admission rates and release rates from 1992 to 1994 in the included Baltimore neighborhoods represent distinct trends when compared to an earlier period. For example, trends in both admissions and releases from the period directly prior to the study period, from 1987 to 1992, represent an overwhelming upward

trend. All but one neighborhood experienced a positive admission rate and two neighborhoods were stable from 1987 to 1992. Similarly, all but two neighborhoods experienced an increasing release rate and one neighborhood was stable from 1987 to 1992 (data not shown).[37] The difference in neighborhood-level prison admissions and releases from 1992 to 1994 compared to 1987 to 1992 is evidence that these trends experience variation across time, which provides a basis of support for causal ordering since it is unlikely that these trends were identical or even similar in the period that follows and thus, cannot likely be concluded as resulting from the tested outcomes.

BIVARIATE RESULTS

Bivariate correlations among neighborhood-level study variables can be found in Table 2. Notably, concentrated disadvantage is highly correlated with several outcomes, including income (r= -.76, p<. 01) and marriage (r= -.63, p< .01). Since these correlations may present potential issues with multi-collinearity, separate models, excluding the highly correlated (>|.50|) components of concentrated disadvantage were also estimated. These models confirmed the study results except where noted.[38]

[Table 2 about here]

Several other interesting bivariate findings emerged from the data. First, although concentrated disadvantage is correlated with defensive neighboring, it is not related to general neighboring (e.g., visiting with neighbors), perhaps because general neighboring may occur regardless of disadvantage (Browning, 2009). However, previous research has posited that neighboring fulfills other functions outside of crime control and defensive

[37]The 1987 to 1992 change in admission and release rates are calculated based on 27 and 26 neighborhoods, respectively, due to missing data points.

[38]Only one model, income, was no longer significant when highly correlated (>|.50|) components of concentrated disadvantage were included.

strategies in disadvantaged areas (Anderson, 1999; Suttles, 1968), which may explain why defensive neighboring is significantly and inversely related to concentrated disadvantage. Second, the change in prison admissions from 1992-1994 is inversely related to residential mobility (r= -.39, p< .05). This finding may be because the incarceration of residents forces the friends, family, and neighbors to stay within the neighborhood due to economic decline and an inability to move out once their loved one is incarcerated. Finally, reprimanding neighborhood children is correlated with a number of different variables at the neighborhood-level, including measures of physical (i.e., income (r= -.59, p< .01)), human (i.e., high school completion (r= -.49, p< .01)), and social capital (i.e., marriage (r= -.44, p< .05)), while informal social control is only related to high school completion *(*r= -.38, p<.05) (human capital) and formal social control is related to income (r= .45, p<.05) (physical capital) and being out of the workforce (r= -.50, p<.01) (human capital), perhaps suggesting potential mediators for these outcomes in relation to prison admissions and releases.

MULTIVARIATE RESULTS

PRISON ADMISSIONS

Direct Relationships

Research Question 1: Consequences of Prison Admissions for Forms of Capital

With respect to prison admissions and neighborhood-level outcomes, Research Question 1 first asks, 'Are women's and men's neighborhood-level forms of capital (physical, human, and social) affected by prison admissions?' In addition, Research Question 1 proceeds to ask 'Are the effects of prison admissions to women's and men's

forms of capital significantly different from one another, meaning are the effects of prison admissions on women's and men's forms of capital significantly gendered?'

Physical and Human Capital

Table 3 summarizes the effects of prison admissions on women's and men's physical and human capital at the neighborhood-level. As shown in Table 3, changes in prison admissions are not significantly correlated with effects to women's physical or human capital at the neighborhood-level.[39] Additionally, the association between prison admissions and men's physical and human capital is not significant at this level.

[Table 3 about here]

With respect to the gendered nature of effects, the Clogg test, reported in the bottom row of Table 3, shows that the associations between prison admissions and physical and human capital are not significantly gendered.

Social Capital

In line with the proposed gendered theory of coercive mobility, the association between prison admissions and women's aggregate social capital is negative and significant, as shown in Table 4. Declines in the proportion of married women, women's social ties, and women's perceptions of both community solidarity and the presence of voluntary associations are associated with prison admissions. Specifically, a one unit increase in the change in prison admissions is associated with a 2.1% decline in the proportion of married women at the neighborhood-level (b= -0.015, se=0.006, p<.05).[40]

[39]A change in prison admission rates is associated with a significant decline (b= -0.078, p<.05) in women's aggregate income. However, when components of concentrated disadvantage that are highly correlated (>|.50|) with income are removed the coefficients for prison admissions are no longer significant.

[40]The 2.1% decline in the proportion of married women, as well as subsequent percentage changes in coefficients, is calculated using the observed scale of the respective coefficient (i.e., women's marriage) and using the equation (b /range) x 100 = % change (i.e., women's marriage: min.= 0.13, max.= 0.83, range= 0.70; (0.015/0.70) x 100= 2.1%).

In addition, the average number of social ties women report within their neighborhood declines by 0.331 (se=0.134, p<.05) friends and relatives in association with every one unit increase in the change in prison admissions. Furthermore, women's reports of community solidarity, a measure of feelings of neighborhood attachment and closeness among neighbors, declines by 0.023 (se=0.011, p<.05), which is about a 2% (1.6%) decline in the observed scale of women's community solidarity. Lastly, women's aggregate perceptions of the number of voluntary associations located within their neighborhood decreases by 0.071 (se=0.038, p<.10) neighborhood associations in relation to every one unit increase in the change in prison admission rates.

[Table 4 about here]

Also shown within Table 4, men experience declines in different types of social capital, namely neighboring, in association with a change in prison admissions compared to women. More specifically, a one unit increase in the change in prison admissions is associated with a 0.010 (se=0.005, p<.10) decline in men's general neighboring, a measure of neighbor engagement (equivalent to a 2.0% decline on men's observed scale of general neighboring). In addition, a one unit increase in the change in prison admissions is also associated with a significant decrease in men's defensive neighboring (*b*= -0.010, se=0.004, p<.05), a measure of residents' investment in the security of their neighbor's homes (equivalent to a 2.1% decline).

Models with additional controls, adding the neighborhood crime rate and neighborhood population, confirm the significant results for women's and men's social capital and are presented in Appendix C.[41] Appendix B presents models for women's and

[41]Nearly all (91.7%) of the significant findings produced by the neighborhood-level models (for prison admissions and releases) were replicated within models containing additional controls; only one (the

men's physical and human capital with additional controls (although no significant findings for these outcomes were reported in the main models). The confirmation of findings for models with addition controls and neighborhood crime rate, in particular, provides evidence in support of the correct causal ordering of variables. Since controlling for crime acts as a proxy for previous measures of capital and the significance of the association between prison admissions and included outcomes remains after controlling for crime, the possibility of the reverse ordering of variables is diminished with confirmation of these results.

Concerning the gendered nature of the findings for women's and men's social capital, all of the coefficients for prison admissions and women's and men's social capital are in the same direction and all are negative (meaning deleterious). However, the magnitude of the association between prison admissions and general neighboring is significantly gendered as shown by the Clogg test ($z=1.33$, $p<.10$). Men's decline in general neighboring is stronger than women's. While the associated decline for men is 2% on men's scale of general neighboring, the decline for women is equivalent to 0.7% on women's scale of general neighboring (non-significant).

Research Question 2: Consequences of Prison Admissions for Social Control

The next set of results pertains to Research Question 2, "Are women's and men's neighborhood-level forms of social control affected by prison admissions?" These findings are reported in Table 5.

[Table 5 about here]

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association between prison releases and the proportion of men who are out of the workforce) of the 12 significant effects found within the neighborhood-level models is non-significant in models containing additional controls.

First, a significant finding for women is present. A change in prison admissions is associated with a significant decline in women's aggregated informal social control efforts (*b*= -0.010, se=0.006, p<.10), which includes respondents' perceptions of their neighbors' willingness to approach a crime scenario themselves or to involve another neighbor for help. This finding equates to a 1.8% decrease in the perceptions of women's informal social control efforts in association with every one unit increase in the change in prison admissions.

Concerning men, their initiation of formal social control, or their perception of neighbors' willingness to call the police, significantly decreases (*b*= -0.006, se=0.003, p<.05) in association with a change in prison admissions. This decrease is equivalent to a 2.2% decline in men's formal social control in association with every one unit increase in the change in prison admissions.[42]

Research Question 2 also asks, of the significant findings, 'Are these effects gendered?' Based on the Clogg equality of coefficients test, reported in the bottom row of Table 5, both the effect of prison admissions on informal social control (z= -1.50, p<.10) and the effect of prison admissions on formal social control (z=1.67, p<.05) are significantly gendered.[43] In fact, the association between prison admissions and men's informal social control and prison admissions and women's formal social control, although not significant, are in the opposite direction (positive) than the significant negative associations between prison admissions and women's informal social control

[42]The addition of neighborhood crime, neighborhood population, and lack of police response, did not change the significance of the associations found among prison admissions and social control for women and men. Models including these controls are reported in Appendix D.

[43]Given that the present study's Clogg test n=60 (30 aggregations of women and 30 aggregations of men) may be considered small with the potential to violate the assumption of a normal distribution required by the Clogg test an equality of coefficients test for small samples (see Cohen, 1983) was also estimated for this and other neighborhood-level results. Findings of this test were non-significant.

and prison admissions and men's formal social control, indicating both substantively and statistically that the impacts of prison admissions on social control are gendered. Specifically, men experience approximately a 0.2% *increase* in informal social control (non-significant) compared to the 1.8% *decline* that women experience and women experience *no change* (*b*= 0.00) in formal social control (non-significant) compared to the 2.2% *decline* that men experience in association with a change in prison admissions.

Mediating Relationships

Research Question 3: Mediation by Women's and Men's Forms of Capital in the Relationship between Prison Admissions and Social Control

Now that the first criteria of mediation, establishing the significant direct associations between prison admissions and social control and the second criteria for mediation, establishing the significant direct associations among prison admissions and potential mediators, have been established, the analysis can proceed to answer Research Question 3, with respect to prison admissions and neighborhood-level forms of capital, which asks 'Do women's and men's neighborhood-level capital mediate the relationship between prison admissions and neighborhood-level social control?' Although this question cannot be answered with specific regards to gender with the use of significance testing, such as the Clogg test for direct effects, this step will establish whether women or men provide more domains of capital capable of explaining the relationship between prison admissions and social control.

Mediation

Since both women's informal social control and men's formal social control were found to be significantly related to prison admissions (Figure 5, path #1) both of these relationships will be explored further within the mediation analysis. First, the potential

mediators that were found to be significantly related to prison admissions (Figure 5, path #2; see Tables 3 and 4) will be tested to see if they are also related to women's informal social control (Figure 5, path #3). As shown in Tables 3 and 4, prison admissions are significantly related to women's marriage, social ties, community solidarity, and perceptions of voluntary associations, as well as men's general and defensive neighboring. These potential mediators are included in Table 6. The top portion of the table, labeled "Women's Informal Social Control," presents each variable's association with women's informal social control.

[Table 6 about here]

As shown in Table 6, women's marriage, social ties, community solidarity, and perceptions of voluntary associations are significantly associated with women's informal social control. Therefore, these variables will be further examined in the mediation analysis. Similarly, the association between these potential mediators and men's formal social control are examined in the bottom portion of Table 6, labeled "Men's Initiation of Formal Social Control." As shown, women's aggregated income and social ties are significantly associated with men's formal social control.

Next, the significant forms of social capital from Table 6 are further examined in order to determine which of them reduce the coefficient for prison admissions once entered into models estimating women's informal social control and men's formal social control, respectively. Table 7 reports these findings. Model 1 contains prison admissions, concentrated disadvantage, and residential mobility.[44] Each subsequent model includes a single potential mediator, which was found to be significantly associated with either

[44]Models excluding concentrated disadvantage and residential mobility produce substantively similar results (results not shown).

women's informal social control or men's formal social control (as reported in Table 6), respectively.

[Table 7 about here]

As seen in the upper portion of the Table 7, labeled "Women's Informal Social Control," the coefficient for prison admissions is reduced to non-significance when each of the potential mediators is introduced. The bottom portion of Table 7, labeled "Men's Formal Social Control," also reveals that both of the potential mediators reduce the coefficient for prison admissions to non-significance. The reduction in the coefficient for prison admissions with the addition of each potential mediator signifies that the potential mediator may be accounting for a portion of the direct relationship between prison admissions and the respective form of social control, thereby reducing the direct relationship. However, the reduction in the coefficient is not conclusive evidence for mediation and it cannot be concluded as significant without further examination.

Mediation: Bootstrapping Analysis

A bootstrapping mediation test is used to generate a 90% confidence interval surrounding 1,000 estimates of the indirect effect of prison admissions on each significant outcome (i.e. women's informal social control and men's formal social control) through each mediator, while controlling for concentrated disadvantage and residential mobility.[45] When zero does not fall within the 90% confidence interval, it can be concluded that the indirect effect is significantly different from zero at $p<.10$ (two-tailed) and that the mediation is significant.

[45]Bootstrapping tests which did not include concentrated disadvantage and residential mobility produced substantively similar results (results not shown).

In line with gendered coercive mobility theory, women's social capital significantly mediates the relationship between prison admissions and social control. Specifically, the bootstrapping analysis reveals that women's aggregated marriage rates significantly mediate the association found between prison admissions and women's informal social control. The 90% confidence interval, (-0.0212, -0.0020), does not include zero, meaning that it can be concluded that the indirect effect is different from zero. In addition, women's aggregated social ties also significantly mediate the association between prison admissions and women's informal social control, which can be interpreted from the confidence interval: (-0.0092, -0.0003).

As for the relationship between prison admissions and men's formal social control, none of the potential mediators were found to significantly mediate this association. All of the bootstrapping intervals for the mediators in the relationship between prison admissions and men's formal social control contained zero. Therefore, it cannot be concluded that the indirect effect is significantly different from zero at $p<.10$ (two-tailed) and that the mediation is significant.

Summary of Findings for Prison Admissions at the Neighborhood-level

In sum, prison admissions are significantly associated with impacts to women's and men's social capital and social control at the neighborhood-level. As hypothesized by gendered coercive mobility theory, more domains of women's social capital are affected by prison admissions compared to men's. As depicted in Figure 3 (boxes 9, 3 and 4), prison admissions are associated with a decline in women's marriage rates, social ties, community solidarity, and their perceptions of the presence of voluntary associations and informal social control efforts at the neighborhood-level. Prison admissions are also

negatively correlated with impacts to men's general and defensive neighboring, as well as their perception of residents' initiation of formal social control at the neighborhood-level (Figure 3, boxes 9, 6, and 7). Moreover, general neighboring, informal social control, and formal social control were found to be significantly gendered.

In line with gendered coercive mobility theory, women's social capital, specifically aggregated marriage rates and social ties, significantly mediate the relationship between a change in prison admissions and women's aggregated informal social control (see Figure 3, boxes 9, 3 and 4). However, the relationship between prison admissions and men's aggregated initiation of formal social control was not significantly mediated by any of the included forms of aggregated social capital. Also in line with the theory, men's capital does less to explain the relationship between prison admissions and social control compared to women's capital since none of men's aggregated forms of capital significantly mediated the relationship between prison admissions and social control.

PRISON RELEASES

Similar analyses are repeated in order to answer Research Questions 1-3. These analyses are estimated with respect to prison releases at the neighborhood-level. Prison releases are likely to have differential effects since they return formerly incarcerated persons, although likely suffering from stigma, reduced job prospects, institutionalization, and strained relationships as a result of their incarceration experiences, to the neighborhood to possibly fill holes in the social fabric created by their removal. Therefore, their return has the potential to bring some positive effects to

community residents, in addition to negative ones associated with residential mobility and the turmoil caused by the incarceration experience.

Direct Relationships

Research Question 1: Consequences of Prison Releases for Forms of Capital

Physical and Human Capital

Table 8 presents the findings relevant to prison releases and physical and human capital for Research Question 1, which asks, 'Are women's and men's neighborhood-level forms of capital affected by prison releases?' Significant findings are present for the association between prison releases and both women's and men's human capital—but not physical capital. Findings reveal that changes in prison releases are associated with consequences for women's feelings of neighborhood safety. More specifically, a change in prison release rates is associated with a 1.2% increase in women's unsafe perceptions of the neighborhood (b=0.004, se=0.002, p<.10). This finding is counter to the hypothesis that men's ties may fulfil a supervisory capacity that is removed once incarcerated, but is not completely unexpected at the neighborhood-level since the return of an aggregate group of unknown men may be viewed as a threat.

In addition, prison releases are associated with a 1.1% increase (b= 0.011, se=0.006, p<.10) in the percentage of working age men who are out of the workforce.[46] This finding is in line with previous research, showing that incarceration not only results in declining career prospects for men following incarceration (Freeman, 1992; Geller, Garfinkel, and Western, 2011; Pager, 2003), but also has negative implications for the employment prospects of community residents and the neighborhood economy (Browne,

[46]The association between prison releases and men's out of the workforce is not significant in a model with neighborhood crime and population and should be interpreted with caution (see Appendix B).

1997; Huebner, 2005; Rose and Clear, 1998; Western and Beckett, 1999), as hypothesized within the gendered theory of coercive mobility.[47]

[Table 8 about here]

Relevant to the gendered portion of Research Question 1, 'Are the effects of prison admissions to women's and men's forms of capital significantly different from one another?,' the Clogg test, reported in the bottom row of Table 8, reveals that the association between prison releases and being out of the workforce is significantly gendered ($z= -2.57$, $p<.01$). While men experience a 1.1% *increase* in their percentage out of the workforce in association with a change in prison releases, for women, the association is in the opposite direction, although not significant (1.2% *decrease*; $b= -0.007$).

Social Capital

Research Question 1, also asks, 'Are women's and men's forms of social capital affected by prison releases?' as well as, 'Are these effects gendered?' Findings regarding the association between prison releases and social capital are reported in Table 9. Prisons releases are significantly associated with a 0.055 ($se=0.025$, $p<.05$) decline in the number of voluntary associations that women report being present within their neighborhoods.[48] However, with respect to gender, this effect is not significantly different for women and men based on the Clogg test.

[Table 9 about here]

[47]The significant associations among prison releases and women's and men's human capital (with the exception of men's out of the workforce) were confirmed in models with additional controls (see Appendix B).

[48]After adding additional controls for neighborhood crime and neighborhood population this finding remained significant (see Appendix C).

Research Question 2: Consequences of Prison Releases for Social Control

Significant findings are also present for the association between the change in prison releases and social control at the neighborhood-level, shown in Table 10. Although, prison admissions are significantly associated with an impact to women's social control, no significant associations were found between prison releases and women's social control. In addition, unlike the impact of prison admissions, which are significantly associated with a decline in men's formal social control, men's aggregated perceptions of informal social control significantly increase in association with changes in prison releases. More specifically, a one unit increase in the release rate is associated with a 1.4% increase in the observed scale of men's aggregated perceptions of informal social control (b= 0.011, se=0.004, p<.01).[49]

[Table 10 about here]

With regards to gender, the Clogg equality of coefficients test reveals that the effect of prison releases on informal social control (z= -2.65, p<.01) is significantly different for women and men. Women experience approximately a 0.7% *decline* in informal social control (b = -0.004, non-significant) compared to the 1.4% *increase* that men experience in association with prison releases. Interestingly, although the direct effects of releases on formal social control for women and men are non-significant, the directionality of these effects are in opposition to one another and the Clogg test reveals that they are in fact gendered (z=1.50, p<.10).

[49]Models including additional controls (neighborhood crime, neighborhood population, and lack of police response) are reported in Appendix D. The addition of controls did not change the significance of the reported results.

Mediating Relationships

Research Question 3: Mediation by Women's and Men's Forms of Capital in the Relationship between Prison Releases and Social Control

Research Question 3, with respect to prison releases and neighborhood-level forms of capital, specifically asks, 'Do women's and men's neighborhood-level capital (human and social) mediate the relationship between prison releases and neighborhood-level social control?'

Mediation

Table 11 presents models estimating mediation criterion three. Specifically, the models are estimating the association between each potential mediator that is significantly associated with prison releases (see Tables 8 and 9) and men's informal social control (see Figure 5, path #3), which is also significantly associated with prison releases (see Table 10). As shown in the table, women's aggregated perceptions of the presence of voluntary associations in their neighborhoods and men's aggregated being out of the workforce are significantly associated with men's informal social control and will be further tested for mediation.

[Table 11 about here]

The potential mediators (from Table 11) are entered into the models containing prison releases, concentrated disadvantage, and residential mobility presented in Table 12.[50] As shown, the coefficient for prison releases is reduced slightly with the addition of women's aggregated perceptions of the presence of voluntary associations, as well as with the addition of men's aggregated being out of the workforce, although it remains significant in each model. This indicates that the relationship between prison releases and

[50]Models excluding concentrated disadvantage and residential mobility produce substantively similar results (results not shown).

the potential mediators may be accounting for some of the relationship between prison releases and men's informal social control. However, the reduced coefficient for prison releases does not establish that the mediation is significant in either case.

[Table 12 about here]

Mediation: Bootstrapping Analysis

Each potential mediator is further examined within a bootstrapping analysis, including prison releases, concentrated disadvantage, residential mobility, and the potential mediator.[51] The resulting bootstrapped 90% confidence interval produced by estimating the indirect effect of prison releases on men's informal social control through women's aggregated perceptions of the presence of voluntary associations does not include zero (.0007, .0060), indicating that the indirect effect is not equal to zero and that the mediation is significant. However, the interval produced using men's aggregated being out of the workforce does include zero (-.0009, .0112) and therefore, does not indicate significant mediation.

Summary of Findings for Prison Releases at the Neighborhood-level

In sum, prison releases are significantly associated with impacts to women's human and social capital, as well as men's human capital and informal social control at the neighborhood-level. Somewhat contrary to the proposed theory, which hypothesized that the removal of men's ties may diminish women's safety, prison releases are associated with an increase in women's unsafe perceptions of the neighborhood. Furthermore, prison releases are associated with a decline in women's perceptions of the presence of voluntary associations within their neighborhoods, as hypothesized and

[51]Confidence intervals were also estimated without the inclusion of concentrated disadvantage and residential mobility. These intervals produced substantively similar results (results not shown).

depicted in Figure 3 (boxes 9 and 3). Also in line with gendered coercive mobility theory, prison releases are significantly associated with an increase in the proportion of working age men who are not in the workforce (Figure 3, boxes 9 and 6). Finally, prison releases are associated with an increase in men's perception of the initiation of formal social control, indicating a positive or beneficial impact of releases on community social control, distinct from the deleterious effects of prison admissions. Of the significant associations, being out of the workforce and informal social control were found to be significantly gendered.

As with prison admissions, women's aggregated capital, specifically their perceptions of the presence of voluntary associations, mediates the association between a change in prison releases and social control, specifically men's aggregated informal social control (Figure 3, boxes 9, 3, and 7). Men's forms of capital did not mediate the relationships among prison releases and social control (Figure 3, boxes 9, 6, 4 and 7).

SUMMARY OF NEIGHBORHOOD-LEVEL FINDINGS

Overall, incarceration is associated with impacts to women's and men's forms of capital, as well as forms of social control at the neighborhood-level. Prison admissions, in particular, are associated with more numerous deleterious effects to women's capital compared to men's. In addition, women's social capital, significantly mediates the relationships between incarceration and women's and men's informal social control, while men's capital does not. Finally, regarding gendered differences, all significant associations between incarceration and women's and men's informal and formal social control are significantly different for women and men, while the neighborhood-level findings regarding gender and forms of capital are more mixed.

CHAPTER SIX: INDIVIDUAL-LEVEL RESULTS

DESCRIPTIVE STATISTICS

Table 13 reports descriptive statistics for women and men separately at the individual-level. Many differences exist by gender (those highlighted in bold represent statistically significant differences). For instance, a significantly higher proportion of women (9.6%) report being out of the workforce compared to men (5.5%). However, no significant gender differences exist for educational attainment. Overall, the sample is fairly educated, with 82.2% of women and 83.6% of men reporting high school completion/GED equivalency. On average, women significantly perceive of their neighborhoods as more unsafe (mean=0.58, sd=0.25) compared to men (mean=0.43, sd=0.30), yet women report significantly higher levels of community solidarity (mean=2.96, sd=0.64) and engagement in reprimanding neighborhood children (50.4%) compared to men (mean of community solidarity=2.80, sd=0.63; percentage engaged in reprimanding neighborhood children=41.0%).

[Table 13 about here]

BIVARIATE ANALYSES

Table 14 reports the bivariate correlations among individual-level variables. Key differences in the correlations at the individual and neighborhood-level indicate that these relationships operate differently at various stages as coercive mobility unfolds. For example, informal social control and the initiation of formal social control are weakly correlated (r= .20, p< .01) at the individual-level, yet shared no relationship in the aggregate form. The lack of an aggregate relationship is unexpected given coercive mobility theory's description of their inter-reliance (Clear, 2007; Rose and Clear, 1998).

In addition, several forms of social capital are related at the individual-level, but not at the neighborhood-level. For example, social ties is significantly correlated with the presence of voluntary associations (r= .30, p< .01) and community solidarity (r= .26, p< .01) at the individual-level, but these measures are unrelated in the aggregate. Other associations present among the aggregated variables are not related at the individual-level. For example, measures of high school completion and not in workforce are not significantly related for individuals, although they are inversely and moderately correlated at the neighborhood-level (r= -.47, p< .01). Similarly, marriage and well-being are unrelated at the individual-level, but are moderately correlated among the aggregated variables (r= .37, p< .05).

On the contrary, some bivariate relationships are consistent across levels. For instance, general neighboring and defensive neighboring are significantly correlated (r= .42, p<. 01) at the individual-level, as well as at the neighborhood-level. Interestingly, reprimanding neighborhood children is not associated with informal social control or the initiation of formal social control at either level. These key differences and similarities can be statistically modeled using multi-level multivariate models.

[Table 14 about here]

MULTIVARIATE RESULTS

Similar to the neighborhood-level results, Research Questions 1-3 are answered by way of a direct and mediation analysis, using multi-level models to estimate the effects of prison admissions and releases on women's and men's individual-level forms of capital and social control. First, unconditional models without predictors were

estimated for each outcome.[52] All subsequent models control for concentrated disadvantage and residential mobility at the neighborhood-level, as well as age, race, homeownership, and the presence of children within the household at the individual-level. Concentrated disadvantage, residential mobility and age, are grand mean centered, while race, homeownership, and the presence of children within the household are left uncentered. Models include 700 individuals nested within 30 neighborhoods.[53]

PRISON ADMISSIONS

Direct Relationships

Research Question 1: Consequences of Prison Admissions for Forms of Capital

Results pertaining to Research Question 1 at the individual-level are reported in the sections that follow. Specifically, Research Question 1 asks, 'Are women's and men's individual-level forms of capital (physical, human, and social) affected by prison admissions?' as well as the follow-up question, 'Are the effects of prison admissions to women's and men's forms of capital significantly different from one another?' or in other words, 'Are they significantly gendered?'

Physical and Human Capital

Impacts to women's physical capital and men's human capital are significantly associated with a change in prison admissions, as shown in Table 15. Specifically,

[52]The proportion of variance occurring between female-aggregated neighborhoods or the intraclass correlation coefficient (ICC) ranges from .0005 (social ties) to .1494 (income) among linear models (average ICC= .0535) and from .0010 (not in the workforce) to .5265 (reprimanding neighborhood children) among the Bernoulli models (average ICC= .3028). For male aggregated models, the ICC ranges from .0001 (informal social control) to .2010 (income) among linear models (average ICC= .0656) and from .0001 (property victimization) to .7922 (not in the workforce) among the Bernoulli models (average ICC= .4579).

[53]Four respondents were dropped from the analysis due to missing "presence of children within the household."

women's income is associated with a 0.068 (se=0.038, p<.10) decline, equivalent to a $340 loss annually, for every one unit increase in the change in prison admissions.

Curiously, men experience an increase in high school completion, associated with an increase in the change in prison admissions. In association with every one unit increase in the change in prison admissions, the odds of high school completion for men increases by nearly 11% (OR= 1.106, p<.05). This increase in high school completion may be a selection effect since the removal of men due to incarceration is likely to remove those who are less likely to complete high school, leaving behind a greater proportion of men who are more likely to have completed high school within the community to be surveyed.

[Table 15 about here]

Regarding the gendered nature of these and other multi-level findings, two approaches are used. The Clogg test, which was used to assess the neighborhood-level findings, is used to assess the gendered nature of findings resulting from each multi-level linear model. In addition, since the Clogg test is only appropriate for linear models, an additional model containing the interaction term gender*prison admissions (or gender*prison releases) is estimated in order to assess the gendered nature of dichotomous findings resulting from Bernoulli models. The stratified models are reported as the main models for both continuous and dichotomous outcomes, as well as either the relevant interaction term (and confidence interval) for Bernoulli models or Clogg test for linear models. Shown in the bottom row of Table 15, the Clogg test and estimations of a gendered interaction term reveal that the associations between prison admissions and

women's and men's individual-level physical and human capital are not significantly different from one another.

Social Capital

In addition, prison admissions are significantly associated with women's and men's social capital. These findings are reported in Table 16. As shown, for every one unit change in prison admissions women's perceptions of the number of voluntary associations in their neighborhoods declines by 0.050 associations (se=0.022, p<.05).

Contrary to the proposed gendered theory of coercive mobility, the majority of significant associations between prison admissions and individual-level social capital occur to men. Men experience a decline in many forms of social capital, including general neighboring (*b*= -0.008, se= 0.003, p<.05), defensive neighboring (*b*= -0.006, se=0.004, p<.10), community solidarity (*b*= -0.015, se=0.010, p<.10), and their perceptions of the presence of voluntary associations in their neighborhood (*b*= -0.062, se=0.022, p<.01), in association with a change in prison admissions.

Concerning gender, only the association between prison admissions and general neighboring is significantly different for women and men based on the Clogg test (z=2.00, p<.05), reported in the bottom rows of Table 16. In fact, the effect of prison admissions on general neighboring is in the opposite direction for women (positive), although not significant, compared to men.

[Table 16 about here]

Models estimating the association between prison admissions and physical and human capital with the additional controls of total neighborhood crime rate per 100 residents and the neighborhood population per 1,000 residents are reported in Appendix

E. Models estimating the association between prison admissions and social capital with controls added are reported in Appendix F. These findings confirm the significance of the main models, adding support for the correct causal ordering since controlling for crime acts as a proxy for previous measures of capital, reducing the possibility of the reverse ordering of variables.[54]

Research Question 2: Consequences of Prison Admissions for Social Control

Research Question 2 with respect to prison admissions and individual-level social control asks, 'Are women's and men's individual-level forms of social control affected by prison admissions?' The corresponding results are presented in Table 17.

As shown, contrary to gendered coercive mobility theory, no significant associations between prison admissions and women's individual-level forms of social control were found. For men, however, a change in prison admissions is associated with a significant decline in their individual-level perceptions of formal social control (b= -0.006, se=0.002, $p<.05$), referring to residents' perceptions of neighbors' willingness to call the police.[55]

[Table 17 about here]

The corresponding Clogg equality of coefficients tests and gendered interaction terms are reported in the bottom rows of Table 17. As shown, the association between prison admissions and men's formal social control is significantly different from the

[54]Nearly all (87.5%) of the significant findings produced by the individual-level models (for prison admissions and releases) were replicated within models containing additional controls; only two (the association between prison releases and women's high school completion and prison releases and women's informal social control) of the 16 significant effects found within the individual-level models is non-significant in models containing additional controls.

[55]Appendix G reports models estimating the association of prison admissions and social control with additional controls. The significance of the main models was confirmed in models with the addition of neighborhood crime, neighborhood population, and lack of police response.

association between prison admissions and women's formal social control (z=2.12, p<.05).

Mediating Relationships

Research Question 3: Mediation by Women's and Men's Forms of Capital in the Relationship between Prison Admissions and Social Control

Research Question 3 asks, 'Do women's and men's neighborhood-level capital (physical, human, and social) mediate the relationship between prison admissions and individual-level social control?' Neighborhood-level forms of capital are tested as mediators in the relationship between prison admissions and individual-level forms of social control since the present study is interested in how neighborhood-level effects of incarceration may "feedback" at the individual-level to influence residents' perceptions of social control efforts. These relationships are presented within Figure 5. Within the figure, the outcomes of interest in the multi-level mediation analysis are individual-level forms of social control.

Mediation

The multi-level mediation analysis begins by establishing criterion three of Baron and Kenny's mediation requirements, determining whether the potential mediator is related to the dependent variable (see Figure 5, path #3). To do so, the neighborhood-aggregated forms of capital found to be directly associated with prison admissions (see Tables 3 and 4; Figure 5, path #2) are tested to determine whether they are also significantly associated with men's individual-level formal social control (see Table 17, Figure 5, path #3). Table 18 presents these findings.

[Table 18 about here]

As shown in the table, two of the six potential neighborhood-level mediators, women's aggregated social ties and women's aggregated community solidarity, are significantly associated with men's individual-level formal social control. Therefore, these two variables are further examined in the next step, determining mediation criterion 4.

Table 19 presents Model 1, containing only prison admissions and controls, and subsequent models (Models 2 and 3) with each potential mediator included. As shown in the table, the coefficients for prison admissions are not reduced when women's aggregated social ties and community solidarity are entered into the models. The lack of a reduction in the coefficient for prison admissions once entered into the models indicates that these variables do not mediate the relationship between prison admissions and men's formal social control.[56]

[Table 19 about here]

Summary of Findings for Prison Admissions at the Individual-level

In sum, prison admissions are significantly associated with impacts to women's physical and social capital (see Figure 3, boxes 9 and 2), and men's human and social capital at the individual-level (Figure 3, boxes 9 and 5). Contrary to the gendered theory of coercive mobility, men experienced more significant associations among prison admissions and domains of capital compared to women. With respect to social control, prison admissions only impact men's formal social control at the individual-level, also contrary to the proposed theory. Of these associations, general neighboring and formal social control were found to be significantly gendered.

[56]Quasi-Bayesian Monte Carlo intervals confirmed that women's aggregated social ties and community solidarity do not mediate the relationship between prison admissions and men's individual-level formal social control.

The multi-level mediation results regarding prison admissions are also contrary to the gendered theory of coercive mobility. Surprisingly, none of the included neighborhood-level forms of capital, for women or men, were found to mediate the significant association between prison admissions and men's formal social control measured at the individual-level (Figure 3, boxes 9, 3, 6, and 7).

PRISON RELEASES

Direct Relationships

Research Question 1: Consequences of Prison Releases for Forms of Capital

Physical and Human Capital

With respect to prison releases and women's and men's individual-level forms of capital, Research Question 1, 'Are women's and men's individual-level forms of capital (physical, human, and social) affected by prison releases?' is addressed. In addition, the findings are followed up with an examination of significant differences in effects occurring to women compared to men, answering the question, 'Are these effects gendered?'

Contrary to gendered coercive mobility theory, no significant associations were found between the change in prison releases and women's physical capital. However, the change in prison releases is significantly associated with women's human capital. As shown in Table 20, women's likelihood of completing high school declines by nearly 2% (1.6%) (OR= 0.984, $p<.01$) in association with every unit increase in the change in prison releases. In addition, women's unsafe perceptions of the neighborhood significantly increase (b= 0.004, se= 0.001, $p<.01$) in association with a change in prison releases. Interestingly, the change in prison releases also contributes to beneficial effects for

women, as hypothesized. Women's likelihood of property victimization declines by nearly 3% (2.8%) in association with every one unit increase in the change in prison releases (OR= 0.972, p<.01).[57]

[Table 20 about here]

Concerning men, no significant associations were found between the change in prison releases and their individual-level physical and human capital. Therefore, women experience more associations among prison releases and domains of physical and human capital compared to men as predicted by the gendered theory of coercive mobility.

Despite these significant effects to women's human capital, only the association between the change in prison releases and unsafe perceptions of the neighborhood is significantly gendered based on the Clogg test (z=1.25, p<.10). Specifically, women's unsafe perceptions of their neighborhood increase by 0.004, while men's unsafe perceptions decrease by 0.001 (non-significant) in association with a one unit change in prison releases.

Social Capital

In addition, the association between the change in prison releases and social capital is only significant for women, and not men. In association with every one unit increase in prison releases, women's perceptions of the presence of voluntary associations in their neighborhoods declines by 0.044 (se=0.020, p<.05) associations, as shown in Table 21.[58]

[57]Appendix E presents models estimating the association between the change in prison releases and women's and men's physical and human capital with additional controls. One result, the association between prison releases and women's individual-level high school completion is not confirmed once controls are added. Therefore, this result should be interpreted with caution.

[58]Models with additional controls estimating the relationship between prison releases and social capital are presented in Appendix F. The significance of the main models is confirmed after the addition of the neighborhood crime rate and neighborhood population.

[Table 21 about here]

The Clogg test and estimations of models including a gendered interaction term, reported in the bottom rows of Table 21, assess the gendered nature of the relationships among the change in prison releases and individual-level social capital. As shown, none of the associations between prison releases and women's and men's social capital are significantly gendered.

Research Question 2: Consequences of Prison Releases for Social Control

Table 22 presents the associations between the change in prison releases and women's and men's individual-level social control, controlling for neighborhood-level characteristics. As shown, women's perceptions of neighbors' informal social control efforts significantly decrease in association with a change in prison releases. More specifically, a one unit increase in the change in release rates is associated with a 0.003 decline (se= 0.002, $p<.10$) in women's perceptions of informal social control. In addition, prison releases are also associated with effects to women's perceptions of formal social control. Specifically, every unit increase in the change in prison releases is associated with a 0.002 increase in women's perceptions of formal social control (se=0.001, $p<.10$).

Finally, a change in prison releases is associated with men's perceptions of informal social control at the individual-level. Men's informal social control increases by 0.009 (se=0.003, $p<.01$) in association with every unit increase in the change in prison releases.[59]

[Table 22 about here]

[59]Models estimating social control with additional controls confirmed the results for women's formal social control and men's informal social control. However, the significance of the association between prison releases and women's informal social control was not confirmed in a model containing neighborhood crime rate, neighborhood population, and lack of police response. Therefore, caution should be used when interpreting this result. These models are reported in Appendix G.

The Clogg equality of coefficients test reveals that the association between prison releases and informal social control is significantly gendered ($z= -3.33$, $p<.01$). In addition, the association between prison releases and formal social control is also significantly gendered ($z=2.86$, $p<.01$). In both cases, the effects for women and men are in the opposite direction. Specifically, prison releases are associated with a decrease in women's informal social control and an increase in men's informal social control, as well as an increase in women's formal social control and a decrease in men's formal social control (non-significant).

Mediating Relationships

Research Question 3: Mediation by Women's and Men's Forms of Capital in the Relationship between Prison Releases and Social Control

The multi-level mediation analysis, with regards to prison releases, seeks to answer Research Question 3, 'Do women's and men's neighborhood-level capital mediate the relationship between prison releases and individual-level social control?'

Mediation

Table 23 presents the multi-level mediation analysis for prison releases, in which, each potential neighborhood-level mediator that is significantly associated with a change in prison releases (i.e., women's unsafe perception of the neighborhood, women's perceptions of the presence of voluntary associations, and men's being out of the workforce) (see Tables 8 and 9, Figure 5, path #2) is tested to determine if it has a significant association with the significant individual-level outcomes (i.e., women's informal social control, women's formal social control, and men's informal social control) (Figure 5, path #3).

[Table 23 about here]

As shown in the top portion of Table 23, labeled "Women's Informal Social Control," women's aggregated presence of voluntary associations is significantly related to women's individual-level informal social control. Also shown in Table 23, in the portion labeled "Women's Initiation of Formal Social Control," women's aggregated unsafe perception of the neighborhood is significantly related to women's individual-level formal social control. Lastly, of the tested potential neighborhood-level mediators among the association between a change in prison releases and men's individual-level informal social control, two are significant. Shown in the bottom portion of Table 23, labeled "Men's Informal Social Control," women's aggregated presence of voluntary associations and men's aggregated out of workforce are significantly related to men's individual-level informal social control.

Next, the potential mediators are entered into their respective models to determine if their addition results in a reduction in the coefficient for prison releases. First, women's aggregated presence of voluntary associations is added to a model estimating women's individual-level informal social control containing prison releases, concentrated disadvantage, and residential mobility, as well as individual-level controls. Table 24 presents these results. As shown, the coefficient for the change in prison releases is reduced to non-significance in Model 2 when women's aggregated presence of voluntary associations is entered into the model, indicating potential mediation.

[Table 24 about here]

This step is repeated for the estimation of women's formal social control by adding the significant neighborhood-level mediator, women's unsafe perception of the neighborhood. In this case, the coefficient for incarceration is not reduced and actually

increases in level of significance as shown in Table 24. Since women's aggregated unsafe perception of the neighborhood did not reduce the coefficient for prison releases, it can be concluded that it does not mediate the association found between prison releases and women's initiation of formal social control and is not further examined.[60]

Finally, the significant neighborhood-level mediators are added to the models predicting men's informal social control, also shown in Table 24. The coefficient for prison releases is marginally reduced upon the addition of each mediator, although it remains significant.

Mediation: Monte Carlo Confidence Intervals

The potential mediators used to predict both women's and men's informal social control are further examined using Quasi-Bayesian Monte Carlo Confidence Intervals, estimated with models including prison releases, concentrated disadvantage, residential mobility, and the potential mediator at the neighborhood-level.[61] Concerning the association between the change in prison releases and women's informal social control, women's aggregated perceptions of the presence of voluntary associations includes zero within the 90% confidence interval (-0.004, 0.001), indicating that the indirect effect is equal to zero and that the mediation is not significant. In addition, none of the potential neighborhood-level mediators used in the analysis of men's informal social control produced confidence intervals that exclude zero, indicating that no significant mediation is present for this outcome.

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[60]Quasi-Bayesian Monte Carlo Intervals generated by models including concentrated disadvantage and residential mobility as neighborhood-level controls provided further evidence that mediation was not significant. However, intervals produced excluding these controls indicated significant mediation (interval: (-0.00237, -0.00002), $p<.10$).

[61]Confidence intervals were also estimated without the inclusion of concentrated disadvantage and residential mobility. These intervals produced substantively similar results (results not shown).

Summary of Findings for Prison Releases at the Individual-level

Prison releases are significantly associated with impacts to women's human and social capital (see Figure 3, boxes 9 and 2) and men's social capital (Figure 3, boxes 9 and 5) at the individual-level. As hypothesized by gendered coercive mobility theory, more domains of women's capital are impacted by prison releases compared to men's. In addition, prison releases are related to women's informal and formal social control, as well as men's informal social control. Of the significant associations, unsafe view of the neighborhood, informal social control, and formal social control were found to be significantly gendered.

Contrary to gendered coercive mobility theory, women's aggregated capital does not mediate the associations between prison releases and social control measured at the individual-level (Figure 3, boxes 9, 3, 4, and 7). However, none of men's forms of capital were found to mediate this relationship either (Figure 3, boxes 9, 6, 4, and 7).

SUMMARY OF INDIVIDUAL-LEVEL FINDINGS

Taking prison admissions and releases together, incarceration spans to impact more of women's forms of capital, including physical, human, and social capital, compared to men's (human and social). In addition, both women and men are impacted in terms of their individual-level forms of social control (i.e., informal and formal). None of the potential neighborhood-level forms of capital for women or men mediated the association between incarceration and social control at the individual-level.

As with the neighborhood-level, all of the significant associations between incarceration and women's and men's informal and formal social control are significantly

gendered. However, the individual-level findings regarding gender and forms of capital are more mixed.

CHAPTER SEVEN: DISCUSSION

CONCLUSIONS FROM THE FULL STORY: COMBINING INDIVIDUAL AND NEIGHBORHOOD-LEVEL FINDINGS

Careful review of the direct, gendered, and mediating relationships among incarceration and women's and men's capital and social control, reveals considerable support for the gendered theory of coercive mobility. To begin, the direct relationships examined in the present study reveal that incarceration is a contributor to a host of negative implications for communities and community members who already face numerous obstacles, a point which is strongly cited in extant work (see, for example, Hagan and Coleman, 2001; Hagan and Dinovitzer, 1999; Wacquant, 1998; Wildeman and Western, 2010). Furthermore, the period under study takes place during the first half of a (thus far) four-decade long rise in national incarceration rates, bringing added concern regarding the accumulation of consequences that incarceration has on these vulnerable communities and residents. Specifically, results show that individuals who are not incarcerated are affected in terms of their physical, human, and social capital, as well as in ways that are related to further crime and criminal justice processes, including reporting and responding to crime in their communities.

The direct effects of incarceration on women's (see Figure 3, boxes 9, 2, and 3) and men's forms of capital and social control (see Figure 3, boxes 9, 5, and 6), paint an interesting picture worthy of further investigation. Figure 8 provides a summary of the impacts of prison admissions at both levels of analysis. Here, the associations between admissions and women's forms of capital and social control are labeled with a "(w)," those for men are labeled with an "(m)," and associations present for both women and men are labeled with a "(b)."

[Figure 8 about here]

As shown, most of the significant associations between prison admissions and individual-level forms of capital occur for men. On the other hand, most of the significant associations between prison admissions and neighborhood-level forms of capital (social is the only significant form) occur for women. In addition, only men's social control is affected by prison admissions at the individual-level, while both women's and men's social control are impacted at the neighborhood-level. Perhaps this is the case because women make up the majority of the population who remain in the community, experiencing a more aggregated impact, while men may experience prison admissions within the community as more personal, with a greater potential to be incarcerated themselves.

Similar to Figure 8, Figure 9 provides a summary of the associations between prison releases and included outcomes at both levels. As shown, four out of the five significant associations between prison releases and individual-level forms of capital are significant for women, as well as two of the three associations at the neighborhood-level, suggesting that the women who have remained within the community are likely to be personally impacted by prison returns, as well as experience an aggregate impact of returning offenders. In contrast to the findings regarding prison admissions, women experience more significant associations between prison releases and social control at the individual-level, while men experience the only significant direct association among prison releases and social control at the neighborhood-level. Therefore, the opposite may be true regarding releases, women may experience prison releases as more personal, since

they are often the ones personally anticipating the return of a former inmate, while men experience return as an aggregate phenomenon.

[Figure 9 about here]

Overall, the direct relationships examined within the present study show that women are negatively impacted by incarceration in their communities in terms of their physical, human, and social capital, as well as in terms of their social control efforts, consistent with gendered coercive mobility theory. In addition, men are impacted in numerous ways that also deserve serious attention from future work and future policy implementers.

Furthermore, the results confirm that the ways in which male and female residents respond to incarceration in their communities diverge, particularly regarding their perceptions of social control. Shown in Figures 8 and 9, underlined forms of capital and social control indicate that the association is significantly gendered, meaning that the effect of incarceration is significantly different for women and men. Within Figure 8, all of the associations between prison admissions and forms of social control (individual-level formal and neighborhood-level formal and informal) are significantly gendered. In addition, the associations between prison releases and social control (formal and informal) are significantly gendered at both levels, as shown in Figure 9. These relationships are central given social control's ability to influence neighborhood crime (Bursik and Grasmik, 1993).

Furthermore, two gendered findings in particular, the negative association between prison admissions and women's informal social control at the neighborhood-level and the negative association between prison releases and women's informal social

control at the individual-level, are particularly important to acknowledge given extant work showing that women's informal social control networks may be more important for reducing violent crime relative to men's networks (Rountree and Warner, 1999). Specifically, incarceration's negative impact to women's social control efforts has the potential to contribute to further crime and prison cycling, exacerbating the problems that incarceration is intended to fix (Rose and Clear, 1998).

Although gendered findings regarding social control are consistent with gendered coercive mobility theory, the results offer only a partial confirmation of the gendered theory of coercive mobility as it relates to residents' forms of capital. The study did not find support that many of the associations between incarceration and residents' forms of capital significantly vary by gender at either the neighborhood or individual-level. Shown in Figure 8, the association between prison admissions and general neighboring is significantly gendered at both levels. In addition, the associations between prison releases and some types of human capital (unsafe view of the neighborhood at the individual-level and not in the workforce at the neighborhood-level) are significantly gendered, as shown in Figure 9. However, many of the significant direct findings for residents' capital are not significantly gendered.

Finally, support was found for the addition of women's forms of capital as potential mediators or a mechanism to explain the relationship between incarceration and social control (see Figure 3, boxes 9, 3, and 4), the heart of the proposed gendered coercive mobility theory. Figures 8 and 9 present these relationships, with the measures included in the mediating relationships contained in boxes with connecting arrows to signify the mediating relationships. Women's social capital (marriage, social ties, and the

presence of voluntary associations) significantly mediates the relationship between incarceration and social control at the neighborhood-level. However, none of the included forms of men's capital significantly mediate this relationship. This finding supports the proposed theory, in that, the impact of incarceration to women's capital (specifically, social capital) has important implications for neighborhood-level social control as hypothesized. Therefore, it is crucial that an examination of the implications of incarceration for female residents' is incorporated into the research agendas of future policy and community crime reduction efforts.

Finally, the multi-level mediation analysis revealed that neighborhood-level impacts of incarceration do not appear to feedback at the individual-level as hypothesized by gendered coercive mobility theory (see Figure 4, relationship #4; or see also, Figure 3, boxes 9, 3, and 2). However, temporal ordering may have limited the potential to capture this unraveling of events since this may be an effect that takes several years to unfold. Therefore, future research should aim to examine these relationships further.

In addition to the study's core emphasis on impacts to women and men, divergent findings also emerged regarding prison admissions and releases that are worth noting. Shown in Figure 9, while the consequences of prison releases for residents' forms of capital are mostly deleterious, prison releases also have the beneficial effect of reducing women's individual-level property victimization. In addition, the nearly consistent positive findings associated with prison releases and social control, along with the consistently negative associations between prison admissions and social control provide initial support for policies that aim to curtail incarceration rates through targeted release strategies. These findings distinguish the impacts of prison admissions from releases and

highlight a potential avenue for future research to explore additional 'benefits' of releases that could aid community residents.

Overall, support is drawn for gendered coercive mobility. Mainly, the significance of women's social capital as a mediator in the relationship between incarceration and social capital, as well as the numerous significant direct associations between incarceration and women's capital, as well as the consistency of findings regarding the gendered nature of the association between incarceration and social control contribute to confirmation of the main components of gendered coercive mobility theory. Not without its dissention, some findings, including the lack of gendered differences concerning forms of capital and the absence of a "feedback" effect of neighborhood-level forms of capital on individual-level social control, provide opportunities to examine these areas further in future work rather than diminish the theories main premises.

LIMITATIONS AND FUTURE RESEARCH

The data used in the present study provide a valuable opportunity to examine the consequences of incarceration for women's and men's capital and social control, as they are currently the only publically available data of their kind. However, the data and the methods that accompany them are not without their limitations.

First, these data were collected at a specific historical time point in Baltimore. This fact may preclude generalizability of the findings to other cities and time periods. In general, Baltimore shared (and still shares) many similarities, including population decline, demographics, and changing crime trends, with other moderately-sized cities during this time period. Despite this, Baltimore had higher rates of violence compared to other cities, which may have contributed to a context of police-citizen tension—perhaps

not unlike the context of neighborhoods plagued by high incarceration rates, but one—that could potentially influence the findings presented here. Namely, increasing rates of incarceration are likely to coincide with police-citizen encounters, such as arrest, which are also likely to produce declines in formal, as well as informal social control. If this is the case, the findings presented here may attribute declines in social control to incarceration that may also be caused by arrests and other citizen-police encounters. Similarly, the actual association between prison releases and increased social control may be stronger than estimated and tempered due to the negative effect of other citizen-police encounters.

Second, the forms of capital and social control included in the present study are limited to those included within the data. Specifically, the data does not include a measure of violent victimization. Given the significant positive associations among prison releases and women's unsafe view of the neighborhood at both the individual and neighborhood-level, combined with the significant negative association among prison releases and women's individual-level property victimization, it would be interesting to see whether the association between prison releases and women's violent victimization is significant and in which direction. Therefore, the addition of a measure of violent victimization should be examined in future work. In addition, although the present data has the advantage of including separate forms of social control, including informal, formal, and the reprimanding of neighborhood children, a global or combined measure of social control was not tested in the present study. Similarly, the data does not include a measure of *collective efficacy*, which combines neighbor cohesion with a scale of global social control, and is also related to crime reduction (see Sampson, Raudenbush, and Earls, 1997).

Lastly, the issue of endogeneity is most crucial to the interpretation of results. Due to the confounding of incarceration with the many conditions of disadvantage, crime, social control, and other attributes, the difficulty in isolating and attributing effects to incarceration alone is paramount. A number of methodological choices, such as controlling for prior neighborhood crime, as well as identifying the variation in the changes in incarceration rates during the period under study, draw support for the conclusion that incarceration contributes to the included outcomes. However, firm evidence, such as ruling out the reverse causal ordering of variables (i.e., estimating the effect that social control and forms of capital have on future incarceration rates) with regression was not possible with these data given the included years of incarceration rates. Therefore, the present study may be interpreted as a snapshot or a single perspective on the issue and cannot be concluded as firm evidence regarding the causal impact of incarceration on communities or community members. Consistent with extant literature on the topic, caution should be used when interpreting these results and future research should pursue additional routes to overcoming this issue.

Specifically, additional years of data or another data set could be investigated as a way to overcome all three of these limitations. Since no data similar to the data used in the present study are currently available the most efficient route to acquiring similar data would be to match an existing neighborhood survey with corresponding neighborhood-level incarceration rates. The Project on Human Development in Chicago Neighborhoods (PHDCN) study is one potential dataset that could provide a stronger test of the gendered association between incarceration and individual and neighborhood-level social control. Since corresponding incarceration data is not included in the PHDCN and would need to

be mapped to match the 343 neighborhoods included in the 1995 survey one could match these data for years prior to, as well as proceeding the survey data in order to test a reverse causal ordering hypothesis and potentially rule out the issue of endogeneity. For example, data for the change in incarceration rates from 1993-1995 (needed to confirm the correct causal ordering of the association between incarceration and survey items), as well as for 1995-1997, could potentially rule out the possibility that the 1995 survey items contributed to the incarceration rates from 1995-1997 by estimating models testing this possibility. In addition, the PHDCN data include items similar to the present data and would therefore, be capable of answering similar research questions to those included in the present study, providing a historical comparison to the 1994 Baltimore survey data. In addition, the PHDCN contains additional outcomes of interest (i.e., collective efficacy) that could extend the present research questions. Overall, a comparison of findings using additional data, such as the PHDCN, would add to their generalizability and has the potential to further develop a gendered theory of coercive mobility and provide more detailed policy implications.

Furthermore, although the current study's sample size is not specifically listed as a limitation given its ability to detect effects for the included research questions, the inclusion of a larger sample of neighborhoods, such as the 343 neighborhoods included in the PHDCN, has the potential to ask more nuanced research questions that require stratification beyond the capabilities of the current data. For instance, a larger sample of neighborhoods is capable of answering questions such as, how does the impact of incarceration differ for neighborhoods with "high" verses "low" or "moderate" incarceration rates? Or, is there a "tipping point" in which the effect of incarceration on

social control changes from positive to negative? Similarly, residents in the "worst off" neighborhoods or those with the highest incarceration rates may be less impacted by incarceration compared to those with moderate rates due to the myriad of other harmful circumstances that they encounter as a result of residing within a disadvantaged neighborhood overall (i.e., an inoculation hypothesis), as is suggested by the "collateral damage" literature at the individual-level (Hagan and Dinovitzer, 1999). A larger sample of neighborhoods could test these and other research questions, as well as identify gendered outcomes.

In general, future work should make understanding the gendered implications of incarceration for community residents a top priority given the present study's findings for women's forms of capital, the significant mediation of women's capital in the unfolding of the relationship between incarceration and social control, and the significant gendered impacts to social control. A fuller investigation into each of these findings, with a consideration for the findings that were inconsistent with the proposed theory, is one place to start. For example, although the study's findings did not confirm the gendered nature of incarceration's impact to women's and men's forms of capital, it revealed numerous effects to different domains and types of capital for women and men that can be used to inform future work. One possibility is that women's and men's accumulation of capital may diverge in significant ways. Therefore, the examination of a comprehensive measure of capital in future work may reveal more about the gendered nature of capital for women compared to men, as well as how women's and men's accumulation of capital is related to incarceration.

Furthermore, a combined or comprehensive measure of physical, human, and social capital could be further tested within a gendered mediation analysis (see Preacher and Hayes, 2008). Specifically, the indirect effect of incarceration on social control through women's accumulated capital can be contrasted with the indirect effect of incarceration on social control through men's accumulated capital in order to determine which effect is stronger (MacKinnon, 2000; Preacher and Hayes, 2008). This type of analysis could confirm or dismiss the proposed gendered nature of the mediating relationships within the gendered theory of coercive mobility beyond the findings of the present study.

In addition, the gendered relationship found between incarceration and residents' social control should be investigated in future work. In particular, the present findings suggest an inter-reliance of women's and men's social control efforts. For example, the findings for women's and men's individual-level social control in relation to prison releases as a whole suggest a displacement of social control efforts. For instance, while women's perceptions of informal social control decrease amidst changes in prison releases, their perceptions of formal social control increase, as do men's perceptions of informal social control. Similarly, declines in women's perceptions of voluntary associations associated with prison releases accounted for an increase in men's neighborhood-level informal social control. Perhaps, men residing in neighborhoods where releases rates have contributed to a decline in women's perceptions of involvement in voluntary associations or informal social control efforts compensate by fulfilling these informal roles themselves. The inter-reliance among social control types (formal and informal) has been identified in previous work (Bursik and Grasmik, 1993; Clear and

Karp, 1999; Lynch and Sabol, 2001; Sabol, Coulton, and Korbin, 2004; Silver and Miller, 2004; Warner, 2007). Further examination of the relationships among women's and men's forms of social control, likely with the use of qualitative methods, could provide important insights into how they operate, including whether they are supportive of one another or whether displacement occurs, as well as insights into why certain efforts, including those of women's, may be more effective for crime reduction (Rountree and Warner, 1999).

Finally, future research should seek to uncover and more fully examine the nuanced associations among prison releases and individual-level forms of capital and social control found here. Prison releases are associated with both harmful (i.e., positive association with women's unsafe view of the neighborhood) and beneficial (i.e., negative association with women's property victimization) consequences at this level. Since increasing releases is one avenue for decreasing the prison population, in addition to an already occurring estimated 1,600 releases per day (Petersilia, 2002), it is critical to understand the impact of releases on communities. This avenue of research has the potential to take on a mixed methods approach. One possibility would be to examine these effects with the use of network data or propensity score matching to examine individuals who return to the same or different neighborhoods. In addition to these approaches, there is a need for a qualitative understanding of these complex relationships. Qualitative interviews, similar to Goffman's (2009) study of young black males' experiences with criminal justice contact and impacts to family, employment, and community relationships, could capture the dynamics that occur among women (and men) in neighborhoods with high incarceration rates by asking them about their direct

and indirect experiences with incarceration, social control, and interactions with other residents.

In sum, studies investigating the impacts of incarceration on community residents are rare (Clear, 1996; Lynch and Sabol, 1992; 2004a; 2004b; Lynch et al., 2002; Moore, 1996; Nightingale and Watts, 1996; Rose and Clear, 1998) and have yet to examine specific effects, such as the ones suggested for future research. Furthermore, although the existing literature provides some basic strategies for reducing incarceration and overcoming negative community impacts, little is known about the effects of current incarceration policies. Therefore, it is vital that future research seek to thoroughly examine these consequences in order to inform changes to the current incarceration policy to combat these effects.

POTENTIAL POLICY IMPLICATIONS

The findings of the present study add to the literature on the collateral consequences of incarceration. In addition, they bring awareness to the fact that the consequences of incarceration spread well beyond those who are incarcerated themselves to impact community residents, particularly women and men who reside in neighborhoods with high incarceration rates. Together, with existing literature, the present study's policy suggestions are two-fold and include: 1) reducing incarceration and increasing the use of sentencing alternatives that maintain offenders' ties to community and 2) providing support to community members residing in neighborhoods with high incarceration rates.

In general, the findings are consistent with extant literature on incarceration, which supports policies aimed at reducing the use of incarceration, particularly for non-

violent offenders, and increasing the use of community sanctions. As Wildeman and Western (2010) point out, "nothing" is not a good alternative, but other options and interventions have the potential to maintain and foster individual, family, and community well-being. Community-based sanctions, including probation, community service, and electronic monitoring, are effective alternatives to incarceration, evident in lower recidivism rates (Arment, 2011; Gendreau et al., 2000). Furthermore, these sanctions allow fathers, partners, and family members who are contributing positively to their families to remain in the community where they can continue to provide support and contribute to the functionality of systemic networks. Allowing offenders to stay at home while completing community service, drug treatment, and other requirements of sentencing alternatives allows them to build and maintain pro-social connections and avoid the negative stigma and consequences associated with incarceration. Although some ties to the incarcerated (i.e., those to criminal friends and family members) may be considered deleterious (Sampson and Laub, 1993; Laub and Sampson, 1993) and viewed as beneficial to "knife off" or discontinue for the offender, community alternatives are a more effective approach to maintaining beneficial ties (La Vigne, Davies, and Brazzell, 2008; Parke and Clarke-Stewart, 2003; Petersilia, 2002), while extinguishing negative ties. In addition, literature suggests that maintaining one's prosocial ties with community and family members allows for a continuation and strengthening of social control efforts aimed at crime prevention (Bursik and Grasmick, 1993).

Second, previous literature on the consequences of incarceration has suggested that services and support programs target the partners, children, and family members of the incarcerated (see Clear, Rose, and Ryder, 2001 for a review of suggestions;

Wakefield and Wildeman, 2014). The present study, along with others (Clear, Rose, and Ryder, 2001; Rose and Clear, 1998), suggests that similar strategies be adopted to support the residents of high incarceration communities.

For example, community outreach programs could assist residents with career networking opportunities, resume help, job placement and training, and continued education services. Funds for these types of programs could be generated from neighboring communities, as well as community outreach organizations. Financial services, education counseling, and career services should specifically target women, given the present study's findings of a significant reduction in women's income in association with changes in prison admissions, as well as a significant reduction in women's educational attainment in association with changes in prison releases. Furthermore, parenting classes and assistance with child supervision could be offered in order to help support mother's career and educational pursuits.

In addition, counseling and emotional support services, as well as family and community support groups similar to Al-Inon, and neighborhood watch groups and other programs aimed at encouraging cooperation among citizens and police may be particularly helpful to women, considering the significant negative associations among prison releases and women's unsafe views of their neighborhood. Furthermore, both women and men are likely to benefit from engagement in community organizations given the findings for incarceration's association with declines in men's general and defensive neighboring, as well as declines in both women's and men's community solidarity and perceptions of voluntary associations. Reducing women's unsafe views of the neighborhood and encouraging them to engage in community organizations may offer

opportunities to increase and strengthen their neighborhood social ties, which were found to mediate the relationship between prison admissions and women's aggregate informal social control efforts. Therefore, these efforts provide a route to improving women's informal social control efforts and potentially reducing neighborhood crime, as well as the further cycling of incarceration and subsequent community impacts.

In addition, since the consequences of incarceration for community residents are vast and intertwined with confounding neighborhood factors, the strategies to overcome them must go beyond criminal justice interventions. These strategies must deal with all of the issues related to incarceration in order to be effective in enhancing residents' forms of capital and strengthening informal social controls (Wildeman and Western, 2010). Therefore, the suggested policy implementations at this stage need to go beyond the services offered to partners and family members of the incarcerated, but should also be coupled with justice reinvestment efforts into education, healthcare, and the neighborhood economy. Prevention efforts at this level are expensive, but have lasting effects on reducing incarceration rates through crime reduction. One suggestion for funding such efforts is to re-invest savings from reduced incarceration rates back into the communities that need it most.

CONCLUSION

In sum, the impact of the decades-long trends in rising national incarceration rates concentrated among some of the most vulnerable communities and residents demands the attention of future research. The present study has provided one avenue for advancing a deeper understanding by highlighting the impacts that incarceration has to women's and men's individual and neighborhood-level forms of capital and social control, as well as

provided a gendered examination of these effects. Namely, findings reveal that women's social capital significantly mediates the relationship between incarceration and social control. Furthermore, the impacts of incarceration extend to female and male community residents' physical, human, and social capital in ways that are nearly wholly deleterious, with the exception of some positive impacts to women's and men's perceptions of social control and women's property victimization associated with prison releases. In addition, this study has provided evidence that women and men significantly differ in their response to incarceration in terms of their perceptions of individual and neighborhood-level social controls. Scholars should continue to develop a more advanced understanding of the gendered impacts of incarceration on community members in future research.

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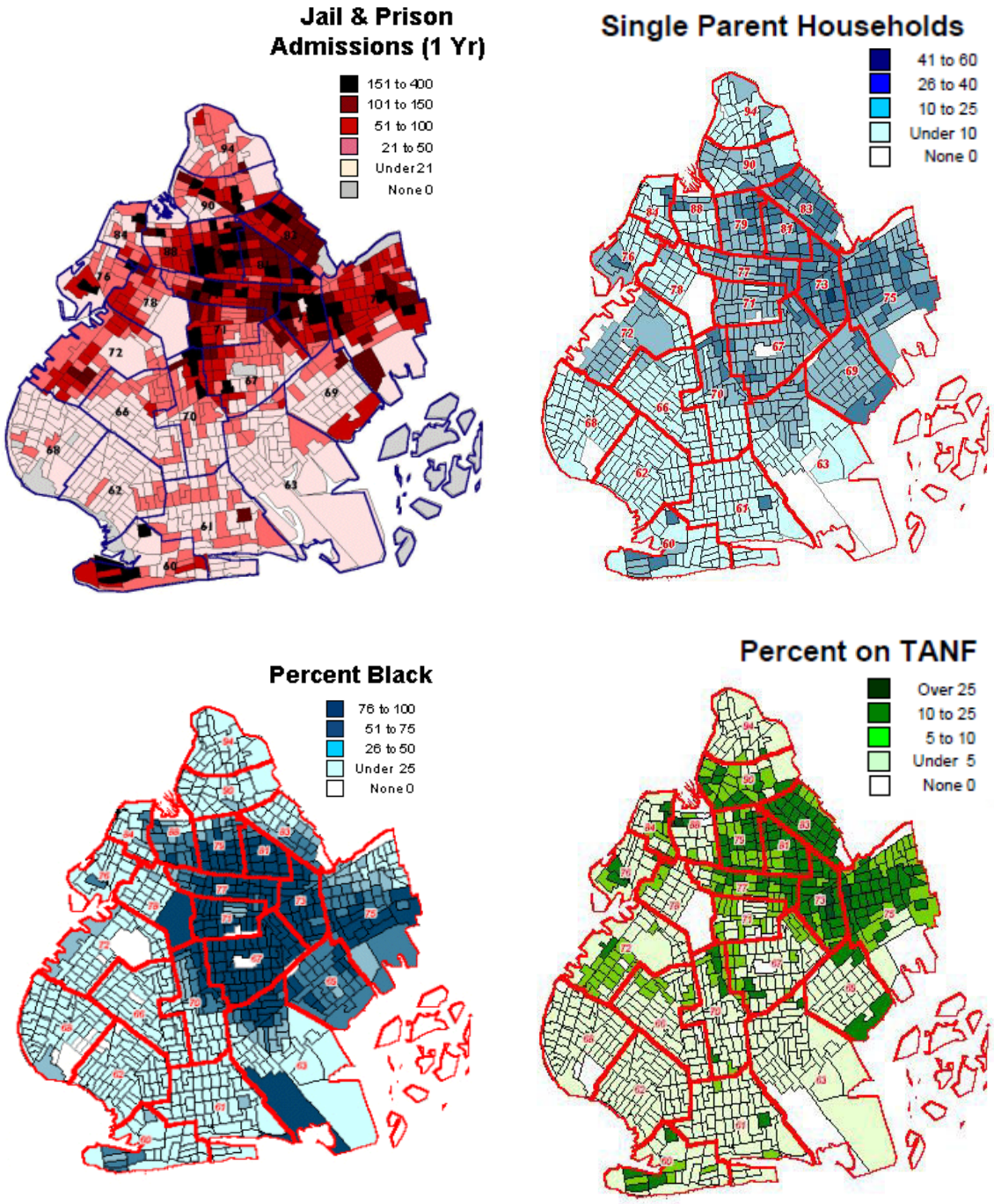
Figure 1: Jail and Prison Admissions by Brooklyn Neighborhood compared to Concentrations of Single Parent Households, Percent of Black Residents, and Percent Receiving Government (TANF) Assistance



Source: Cadora, Eric. 2001. Criminal justice and health and human services: An exploration of overlapping needs, resources, and interests in Brooklyn neighborhoods. Paper presented to NPC.

Figure 2: Summary of Theoretical Relationships present in Coercive Mobility Theory adapted from Rose and Clear (1998)

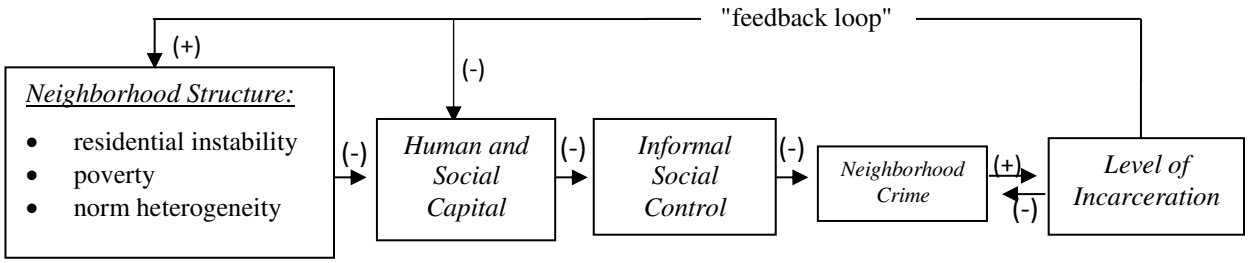
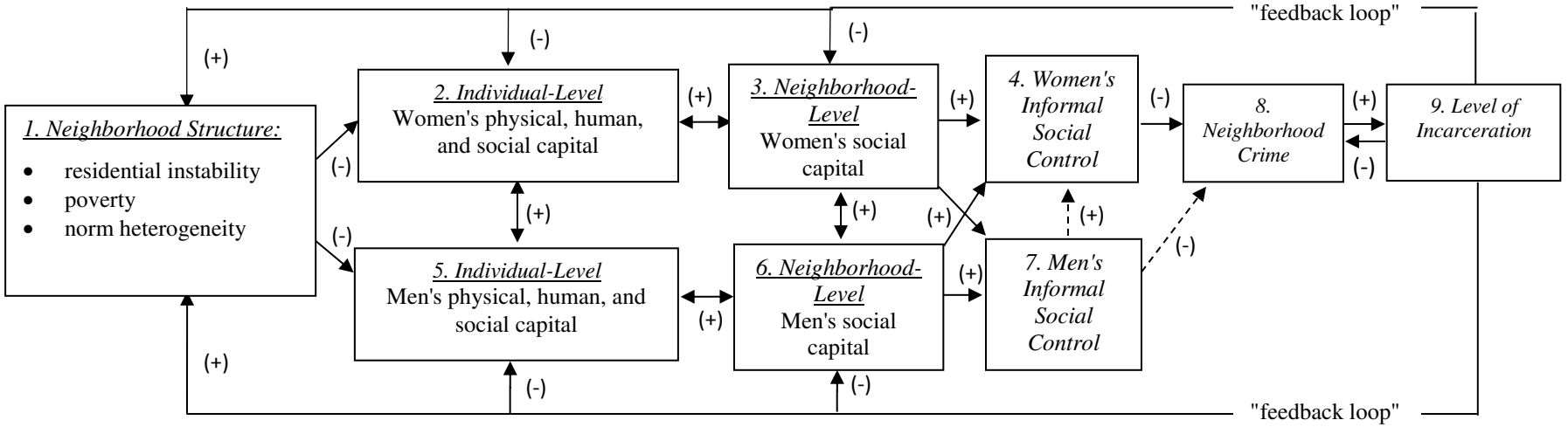


Figure 3: Complete set of Proposed Theoretical Relationships within an expanded *Gendered Theory of Coercive Mobility*



*Dotted arrows indicate that the relationship provides a supportive function.

Figure 4: Summary of Individual and Neighborhood-level Effects

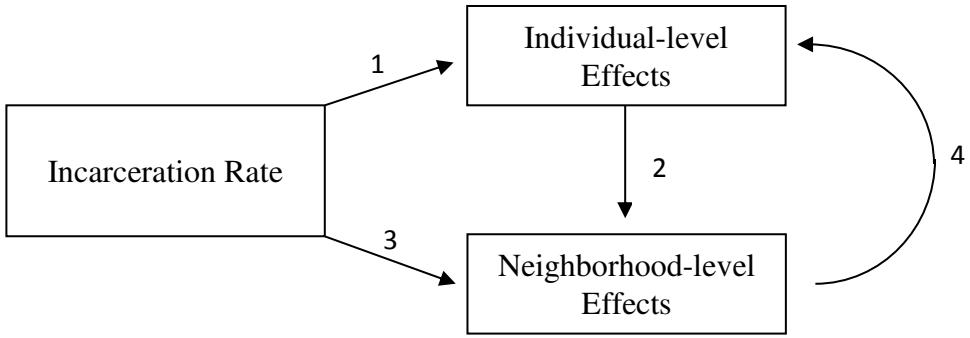


Figure 5: Mediation Criteria

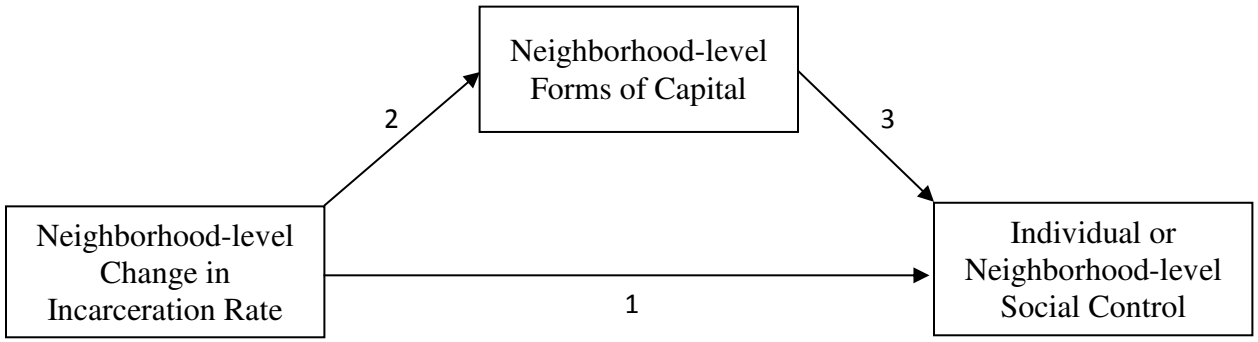
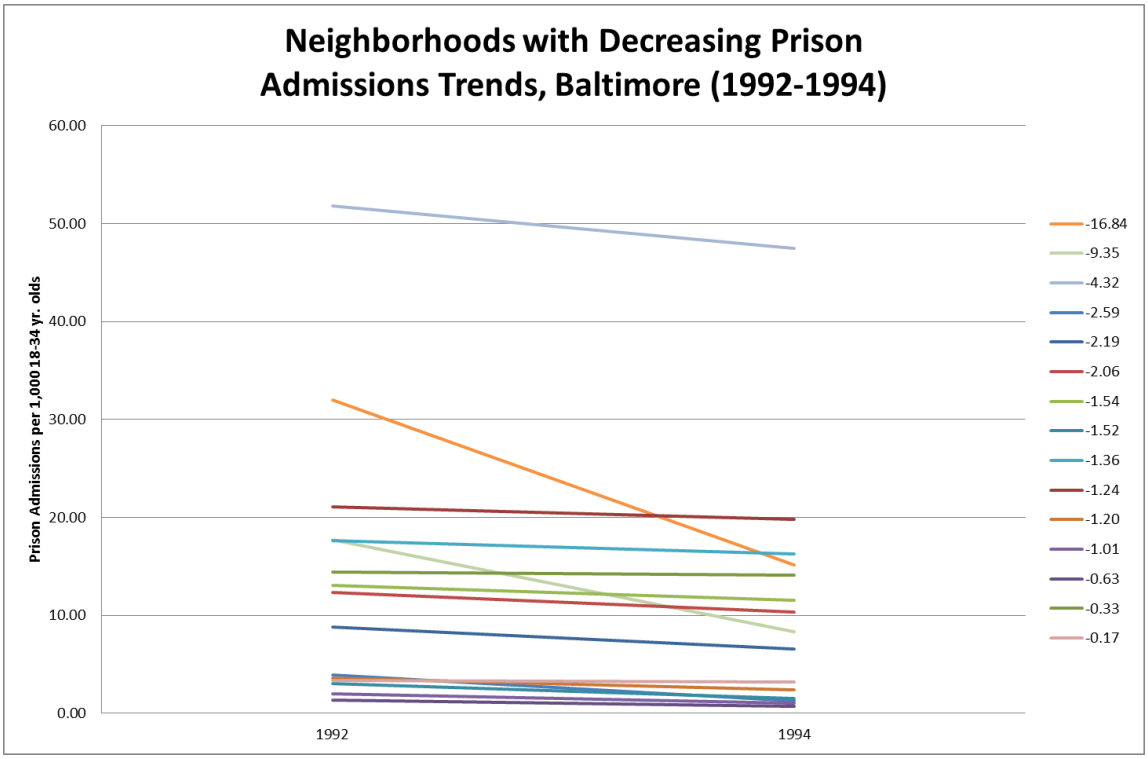


Figure 6: Prison Admission Trends, Baltimore Neighborhoods (1992-1994)



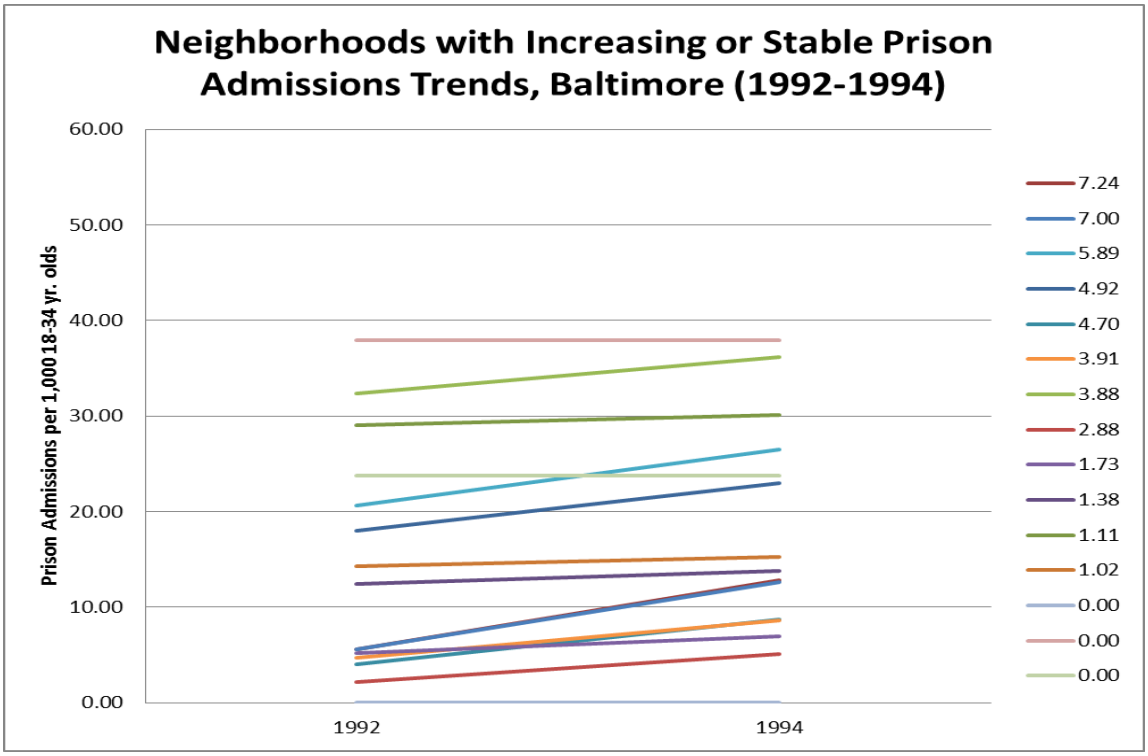
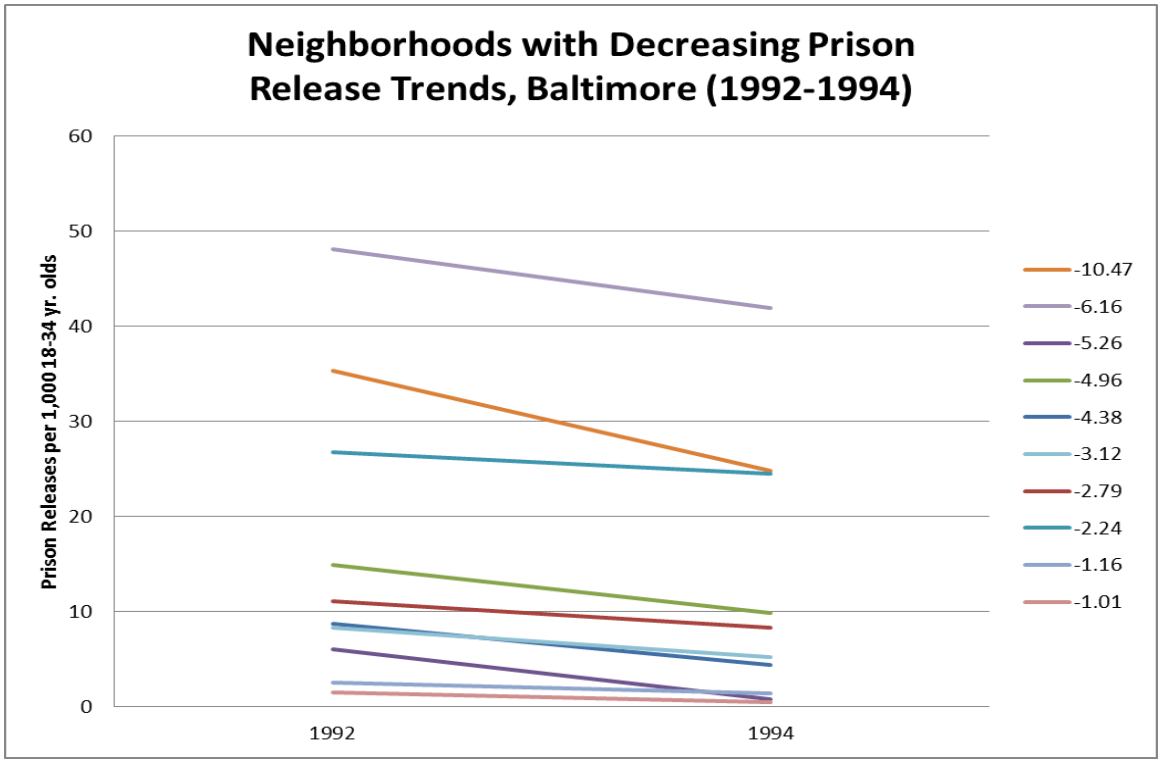


Figure 7: Prison Release Trends, Baltimore Neighborhoods (1992-1994)



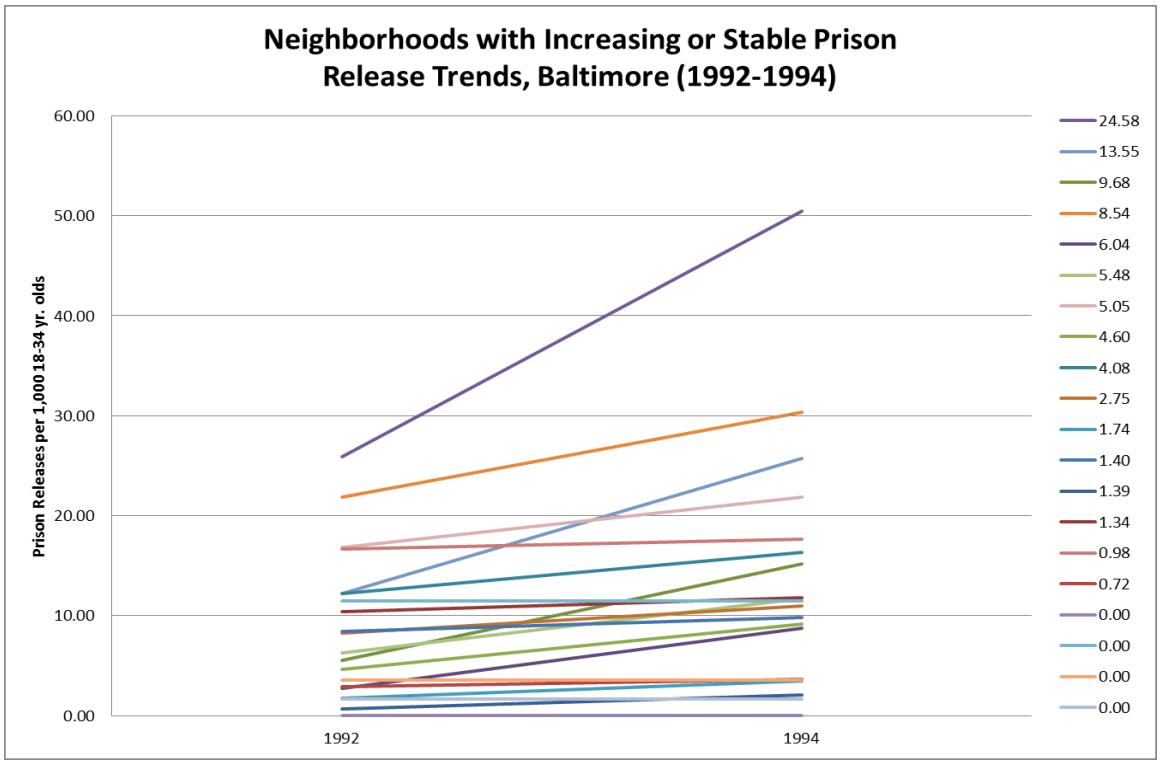
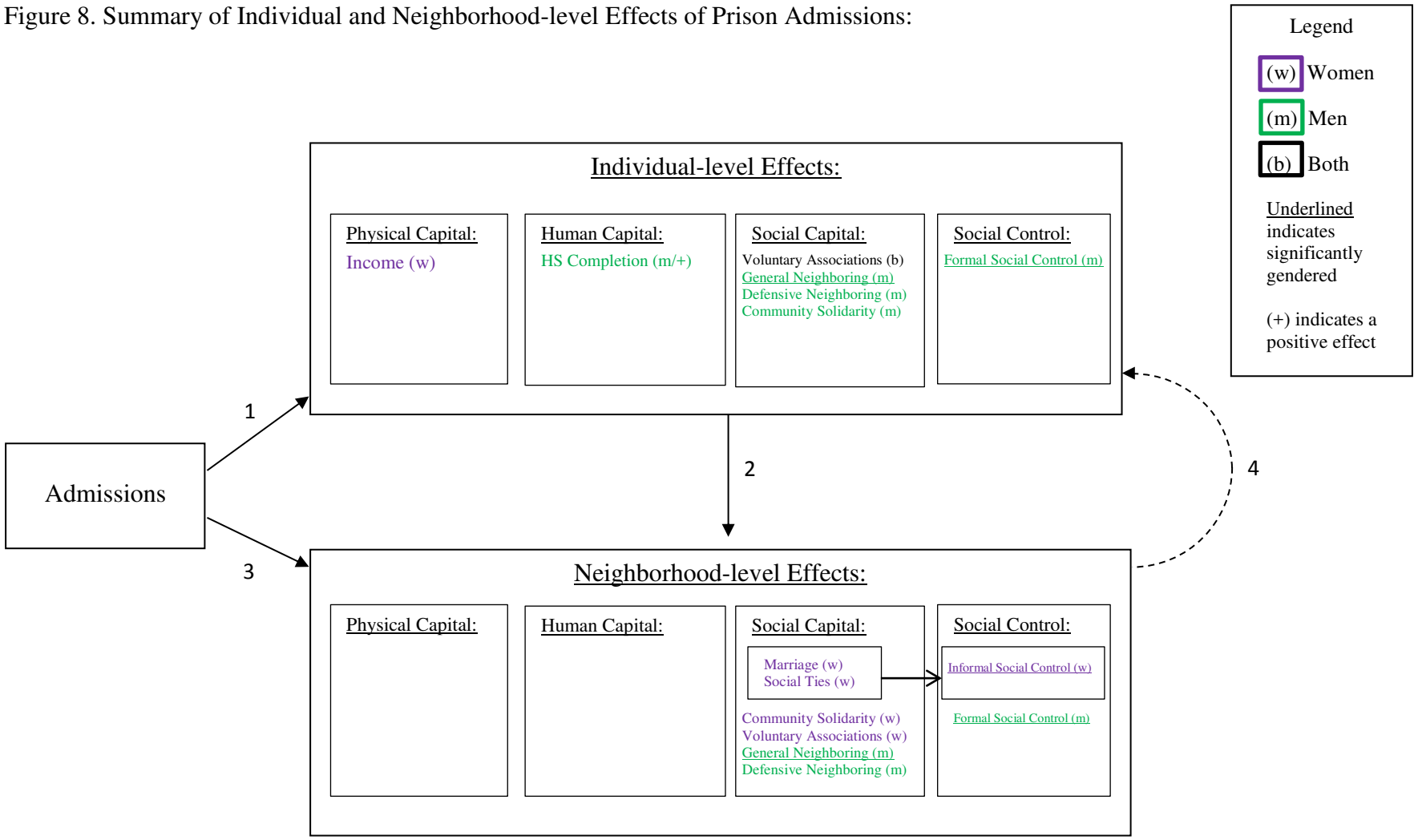
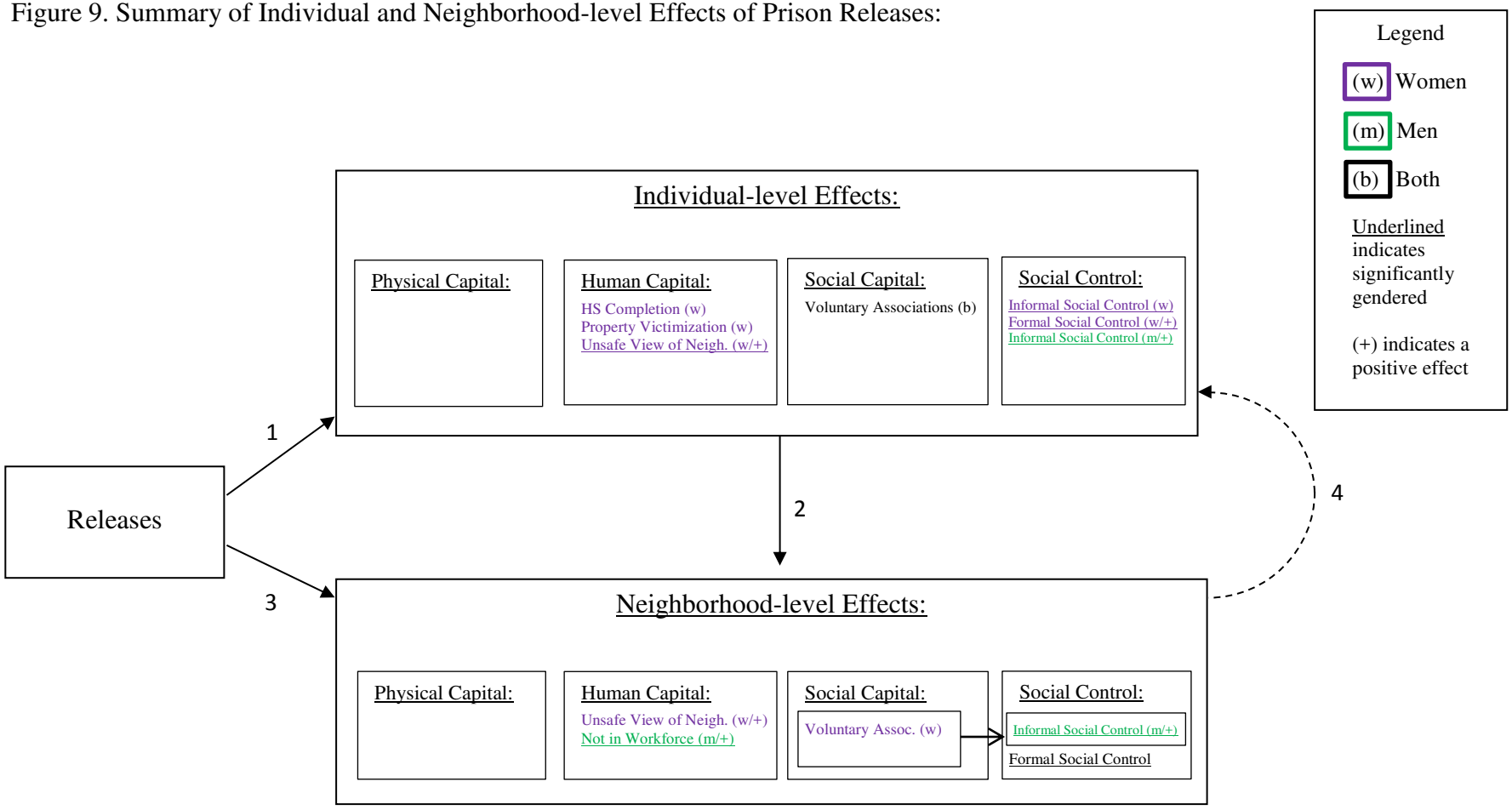


Figure 8. Summary of Individual and Neighborhood-level Effects of Prison Admissions:



*Dotted arrows indicate that the relationship is non-significant.

Figure 9. Summary of Individual and Neighborhood-level Effects of Prison Releases:



*Dotted arrows indicate that the relationship is non-significant.

Table 1. Neighborhood-level Descriptive Statistics of Key Study Variables by Gender

	Aggregated Women				Aggregated Men				Aggregated Full Sample			
(n=30)	Mean/%	SD	Min.	Max.	Mean/%	SD	Min.	Max.	Mean/%	SD	Min.	Max.
Potential Mediators												
Physical Capital												
Income	5.39	1.20	2.89	7.69	5.78	1.51	2.00	7.89	5.51	1.20	2.75	7.77
Human Capital												
HS Completion	82.9%	--	38.5%	100%	82.7%	--	30.0%	100%	82.4%	--	34.8%	100%
Not in Workforce	13.7%	--	0.0%	60.0%	12.9%	--	0.0%	100%	11.8%	--	0.0%	28.6%
Well-being	**2.86**	0.24	2.33	3.36	**3.03**	0.31	2.30	3.83	2.91	0.21	2.32	3.32
Property Victimization	27.0%	--	5.9%	81.8%	23.0%	--	0.0%	50.0%	25.2%	--	8.0%	52.2%
Unsafe Perception of the Neighborhood	**0.59**	0.07	0.41	0.75	**0.44**	0.15	0.17	1.00	0.53	0.07	0.39	0.65
Social Capital												
Marriage	**49.1%**	--	12.5%	83.3%	**58.8%**	--	6.3%	100%	51.6%	--	12.5%	83.3%
Social Ties	7.23	3.35	2.71	17.38	8.78	5.63	2.75	24.80	7.78	3.33	3.00	16.40
General Neighboring	0.59	0.08	0.44	0.73	0.58	0.12	0.32	0.83	0.58	0.07	0.42	0.71
Defensive Neighboring	0.72	0.13	0.42	0.94	0.75	0.12	0.50	0.97	0.73	0.11	0.47	0.91
Community Solidarity	**2.95**	0.29	1.97	3.40	**2.83**	0.29	2.22	3.28	2.90	0.25	2.16	3.33
Presence of Voluntary Associations	3.00	0.94	0.94	5.13	2.69	0.78	1.00	3.67	2.87	0.70	1.16	4.17
Dependent Variables												
Informal Social Control	0.56	0.13	0.23	0.79	0.57	0.14	0.21	1.00	0.56	0.08	0.41	0.74
Reprimanding Neighborhood Children	49.2%	--	11.8%	100%	42.7%	--	0.0%	100%	47.0%	--	8.0%	94.0%
Initiating Formal Social Control	0.95	0.05	0.81	1.00	0.94	0.06	0.73	1.00	0.95	0.04	0.85	1.00
Independent Variables												
Change in Prison Admission Rates ('92-'94)	--	--	--	--	--	--	--	--	-0.02	4.71	-16.84	7.24
Change in Prison Release Rates ('92-'94)	--	--	--	--	--	--	--	--	1.68	6.60	-10.47	24.58
Concentrated disadvantage (1990 Census)	--	--	--	--	--	--	--	--	0.00	0.80	-1.15	1.88
Residential mobility (1990 Census)	--	--	--	--	--	--	--	--	0.00	0.89	-1.64	2.58

Bolded mean/% indicates that an independent samples t-test concluded that aggregated women and men are significantly different from one another; two-tailed, $p<.10$.

Table 2. Bivariate Correlations among Neighborhood-level Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Income	1																		
2. HS Comp.	.628**	1																	
3. Not in Work.	-.512**	-.468**	1																
4. Well-being	.719**	.705**	-.388*	1															
5. Prop. Victim	.242	.324	-.180	.238	1														
6. Unsafe Neigh	-.437*	-.431*	.318	-.292	.024	1													
7. Marriage	.716**	.137	-.219	.368*	-.199	-.230	1												
8. Social Ties	.184	-.042	.207	.191	-.304	.145	.221	1											
9. Gen. Neigh.	.242	.032	-.060	.093	.077	.080	.128	.150	1										
10. Def. Neigh.	.536**	.078	-.137	.183	-.270	-.167	.661**	.323	.547**	1									
11. C Solidarity	.568**	.161	-.125	.298	.047	-.216	.444*	.278	.491**	.560**	1								
12. V. Assoc.	.231	.324	.147	.083	-.007	-.348	.062	.297	.091	.111	.279	1							
13. ISC	-.029	-.382*	-.001	-.317	-.076	.069	.247	.116	-.185	.009	.137	.011	1						
14. Rep. Child.	-.592**	-.490**	.569**	-.567**	-.172	.354	-.440*	.052	.267	-.188	-.133	.002	-.181	1					
15. FSC	.449*	.331	-.498**	.216	.074	-.177	.176	.097	.130	.193	.377*	.069	.306	-.319	1				
16. Admissions	-.083	-.004	-.204	-.096	-.209	-.260	-.138	-.285	-.257	-.187	-.156	-.195	-.162	.053	-.103	1			
17. Releases	-.163	-.243	-.191	-.098	-.207	.334	-.022	-.071	.116	-.023	-.014	-.335	.015	.077	.145	.142	1		
18. R. Mobility	-.199	.044	-.065	.125	.286	.175	-.194	.003	-.006	-.146	-.318	-.339	-.043	-.195	-.224	-.389*	-.118	1	
19. Con. Disad.	-.755**	-.563**	.472**	-.584**	-.083	.432*	-.627**	-.033	.104	-.465**	-.169	-.103	.042	.770**	-.238	-.111	.074	.118	1

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed). HS Comp. = high school completion, Not in Work = not in workforce, Prop. Victim = property victimization, Unsafe Neigh. = unsafe perception of the neighborhood, Gen. Neigh. = general neighboring, Def. Neigh. = defensive neighboring, C. Solidarity = community solidarity, V. Assoc. = presence of voluntary associations, ISC = informal social control, Rep. Child. = reprimanding neighborhood children, FSC = initiating formal social control, Admissions = change in prison admission rates from 1992-1994, Releases = change in prison release rates from 1992-1994, R. Mobility = residential mobility, Con. Disad. = concentrated disadvantage.

Table 3. Change in Prison Admission Rates on Physical and Human Capital by Gender (Neighborhood-level)

	Income	HS Completion	Not in Workforce	Well-being	Property Victimization	Unsafe Perception of Neighborhood
Females						
Change in Admission Rate '92-'94	-.078	-.001	-.005	-.009	-.006	-.003
	(.034)	(.006)	(.006)	(.008)	(.007)	(.003)
Constant	5.388***	.829***	.137***	2.856***	.270***	.587***
	(.143)	(.028)	(.028)	(.033)	(.030)	(.013)
R^2	.617	.291	.077	.502	.274	.206
Males						
Change in Admission Rate '92-'94	-.054	-.004	-.001	.002	-.002	-.005
	(.052)	(.008)	(.009)	(.014)	(.006)	(.007)
Constant	5.784***	.827***	.129***	3.031***	.230***	.443***
	(.220)	(.032)	(.038)	(.058)	(.026)	(.029)
R^2	.434	.247	.202	.039	.075	.067
Equality of Coefficients - Clogg Test (z)	-0.39	0.30	-0.37	-0.69	-0.44	0.26

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage and residential mobility.

Table 4. Change in Prison Admission Rates on Social Capital by Gender (Neighborhood-level)

	Marriage	Social Ties	General Neighboring	Defensive Neighboring	Community Solidarity	Presence of Voluntary Associations
Females						
Change in Admission Rate '92-'94	-.015**	-.331**	-.002	-.007	-.023**	-.071*
	(.006)	(.134)	(.004)	(.005)	(.011)	(.038)
Constant	.491***	7.227***	.592***	.722***	2.950***	2.999***
	(.025)	(.570)	(.015)	(.022)	(.048)	(.161)
R^2	.464	.222	.072	.197	.259	.210
Males						
Change in Admission Rate '92-'94	-.007	-.124	-.010*	-.010**	-.016	-.050
	(.009)	(.252)	(.005)	(.004)	(.012)	(.031)
Constant	.587***	8.776***	.582***	.751***	2.830***	2.687***
	(.037)	(1.074)	(.021)	(.018)	(.052)	(.133)
R^2	.382	.020	.147	.380	.125	.222
Equality of Coefficients - Clogg Test (z)	-0.74	-0.72	1.33*	0.50	-0.44	-0.43

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage and residential mobility.

Table 5. Change in Prison Admission Rates on Social Control by Gender (Neighborhood-level)

	Informal Social Control	Reprimanding Neighborhood Children	Initiating Formal Social Control
Females			
Change in Admission Rate '92-'94	-.010*	.005	.000
	(.006)	(.007)	(.002)
Constant	.560***	.492***	.951***
	(.024)	(.029)	(.009)
R^2	.142	.657	.164
Males			
Change in Admission Rate '92-'94	.002	.002	-.006**
	(.006)	(.010)	(.003)
Constant	.575***	.427***	.943***
	(.027)	(.044)	(.011)
R^2	.008	.309	.174
Equality of Coefficients - Clogg Test (z)	-1.50*	0.25	1.67**

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage and residential mobility.

Table 6. Testing for Mediation: The Relationship between Possible Mediating Variables and Forms of Social Control (Neighborhood-level)

	Female Aggregated Potential Mediators					Male Aggregated Potential Mediators	
	Income	Marriage	Social Ties	Community Solidarity	Presence of Voluntary Associations	General Neighboring	Defensive Neighboring
Women's Informal Social Control							
Mediator	.012	.257*	.013*	.163**	.050*	-.022	.031
	(.021)	(.130)	(.007)	(.081)	(.025)	(.212)	(.212)
Constant	.496***	.434***	.468***	.078	.411***	.573***	.537***
	(.114)	(.068)	(.056)	(.239)	(.078)	(.126)	(.161)
R^2	.012	.122	.106	.127	.125	.000	.001
Men's Initiation of Formal Social Control							
Mediator	.019*	.087	.006*	.037	-.001	.029	.001
	(.009)	(.065)	(.003)	(.041)	(.013)	(.102)	(.102)
Constant	.842***	.900***	.897***	.835***	.946***	.926***	.942***
	(.052)	(.034)	(.027)	(.122)	(.040)	(.061)	(.078)
R^2	.123	.061	.111	.027	.000	.003	.000

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses.

Table 7. Possible Mediators of the Relationship between Change in Prison Admission Rates and Forms of Social Control (Neighborhood-level)

Women's Informal Social Control					
	Model 1	Model 2	Model 3	Model 4	Model 5
Change in Admission Rate '92-'94	-.010*	-.008	-.004	-.007	-.007
	(.006)	(.006)	(.006)	(.006)	(.006)
Potential Mediator(s):					
Presence of Voluntary Associations		.037			
(female aggregated)		(.028)			
Marriage			.438***		
(female aggregated)			(.164)		
Social Ties				.010	
(female aggregated)				(.008)	
Community Solidarity					.155*
(female aggregated)					(.093)
Constant	.560***	.448***	.345***	.490***	.103
	(.024)	(.088)	(.083)	(.063)	(.277)
R^2	.142	.198	.332	.190	.227

Men's Initiation of Formal Social Control			
	Model 1	Model 2	Model 3
Change in Admission Rate '92-'94	-.006**	-.004	-.004
	(.003)	(.003)	(.003)
Potential Mediator(s):			
Income		.017	
(female aggregated)		(.015)	
Social Ties			.004
(female aggregated)			(.004)
Constant	.943***	.853***	.916***
	(.011)	(.083)	(.030)
R^2	.174	.211	.202

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage and residential mobility.

Table 8. Change in Prison Release Rates on Physical and Human Capital by Gender (Neighborhood-level)

	Income	HS Completion	Not in Workforce	Well-being	Property Victimization	Unsafe Perception of Neighborhood
Females						
Change in Release Rate '92-'94	-.019	-.004	-.007	.004	-.003	.004*
	(.024)	(.004)	(.004)	(.005)	(.005)	(.002)
Constant	5.422***	.836***	.148***	2.849***	.274***	.581***
	(.160)	(.028)	(.028)	(.034)	(.031)	(.013)
R^2	.547	.315	.141	.492	.265	.275
Males						
Change in Release Rate '92-'94	-.045	-.006	.011*	-.005	-.005	.002
	(.034)	(.005)	(.006)	(.009)	(.004)	(.005)
Constant	5.862***	.836***	.110***	3.039***	.239***	.440***
	(.224)	(.033)	(.037)	(.060)	(.026)	(.030)
R^2	.449	.273	.306	.049	.128	.058
Equality of Coefficients - Clogg Test (z)	-0.62	0.33	-2.57***	0.90	0.33	0.40

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage and residential mobility.

Table 9. Change in Prison Release Rates on Social Capital by Gender (Neighborhood-level)

	Marriage	Social Ties	General Neighboring	Defensive Neighboring	Community Solidarity	Presence of Voluntary Associations
Females						
Change in Release Rate '92-'94	-.001	-.004	.002	.000	-.005	-.055**
	(.004)	(.099)	(.002)	(.004)	(.008)	(.025)
Constant	.493***	7.242***	.589***	.722***	2.959***	3.093***
	(.029)	(.655)	(.016)	(.024)	(.053)	(.163)
R^2	.337	.039	.085	.139	.153	.246
Males						
Change in Release Rate '92-'94	.007	-.098	-.001	.000	.005	-.030
	(.006)	(.167)	(.003)	(.003)	(.008)	(.021)
Constant	.576***	8.944***	.583***	.751***	2.823***	2.738***
	(.037)	(1.108)	(.023)	(.020)	(.056)	(.139)
R^2	.399	.024	.024	.257	.077	.206
Equality of Coefficients - Clogg Test (z)	-1.14	0.48	0.83	0.00	-0.91	-0.76

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage and residential mobility.

Table 10. Change in Prison Release Rates on Social Control by Gender (Neighborhood-level)

	Informal Social Control	Reprimanding Neighborhood Children	Initiating Formal Social Control
Females			
Change in Release Rate '92-'94	-.004	-.002	.002
	(.004)	(.005)	(.001)
Constant	.567***	.495***	.948***
	(.025)	(.030)	(.009)
R^2	.065	.654	.225
Males			
Change in Release Rate '92-'94	.011***	-.001	-.001
	(.004)	(.007)	(.002)
Constant	.557***	.429***	.944***
	(.024)	(.045)	(.012)
R^2	.263	.309	.032
Equality of Coefficients - Clogg Test (z)	-2.65***	-0.12	1.50*

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage and residential mobility.

Table 11. Testing for Mediation: The Relationship between Possible Mediating Variables and Men's Informal Social Control (Neighborhood-level)

	Female Aggregated Potential Mediators		Male Aggregated Potential Mediators
	Unsafe Perception of Neighborhood	Presence of Voluntary Associations	Not in Workforce
Mediator	.109	-.063**	.308***
	(.353)	(.025)	(.102)
Constant	.511**	.764***	.535***
	(.209)	(.079)	(.026)
R^2	.003	.182	.245

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses.

Table 12. Possible Mediators of the Relationship between Change in Prison Release Rates and Men's Informal Social Control (Neighborhood-level)

	Model 1	Model 4	Model 5
Change in Release Rate '92-'94	.011***	.008**	.007**
	(.004)	(.004)	(.003)
Potential Mediator(s):			
Presence of Voluntary Associations		-.049*	
(female aggregated)		(.028)	
Not in Workforce			.303***
(male aggregated)			(.113)
Constant	.557***	.709***	.523***
	(.024)	(.088)	(.025)
R^2	.263	.347	.427

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage and residential mobility.

Table 13. Individual-level Descriptive Statistics of Key Study Variables by Gender

	Women (n=426)		Men (n=274)		Range	
	Mean/%	SD	Mean/%	SD	Min.	Max.
Potential Mediators						
Physical Capital						
Income (total n=618)	**5.35**	2.50	**5.84**	2.49	0.00	8.00
Human Capital						
HS Completion	82.2%	--	83.6%	--	0.00	1.00
Not in Workforce (total n=688)	**9.6%**	--	**5.5%**	--	0.00	1.00
Well-being	**2.84**	0.70	**3.00**	0.66	1.00	4.00
Property Victimization (total n=696)	25.2%	--	24.2%	--	0.00	1.00
Unsafe Perception of the Neighborhood	**0.58**	0.25	**0.43**	0.30	0.00	1.00
Social Capital						
Marriage (total n=698)	**48.7%**	--	**57.0%**	--	0.00	1.00
Social Ties	7.36	13.32	8.50	17.12	0.00	150.00
General Neighboring	0.59	0.32	0.57	0.31	0.00	1.00
Defensive Neighboring	0.72	0.34	0.74	0.32	0.00	1.00
Community Solidarity	**2.96**	0.64	**2.80**	0.63	1.10	4.00
Presence of Voluntary Associations	2.97	2.14	2.70	1.87	0.00	9.00
Dependent Variables						
Informal Social Control	0.56	0.36	0.56	0.37	0.00	1.00
Reprimanding Neighborhood Children	**50.4%**	--	**41.0%**	--	0.00	1.00
Initiating Formal Social Control	0.95	0.16	0.94	0.18	0.00	1.00
Other Demographics						
Age	52.35	16.64	50.41	16.30	20.00	94.00
Race (% black)	39.0%	--	23.7%	--	0.00	1.00
Homeowner	74.9%	--	75.6%	--	0.00	1.00
Presence of Children within the Household	32.2%	--	20.4%	--	0.00	1.00

Bolded mean/% indicates that an independent samples t-test concluded that women and men are significantly different from one another; two-tailed, $p<.10$. n=700; four cases were dropped from the full sample (n=704) due to missing presence of children within the household.

Table 14. Bivariate Correlations among Individual-level Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Income	1														
2. HS Comp.	.370**	1													
3. Not in Work.	-.083*	-.005	1												
4. Well-being	.235**	.195**	-.120**	1											
5. Victimization	.111**	.125**	-.035	-.009	1										
6. Unsafe Neigh	-.076	-.063	.086*	-.163**	.063	1									
7. Marriage	.407**	.107**	.054	.063	-.027	-.076*	1								
8. Social Ties	.143**	.044	.023	.028	-.031	.053	.046	1							
9. Gen. Neigh.	.184**	.192**	-.027	.134**	.095*	-.038	.115**	.202**	1						
10. Def. Neigh.	.168**	.113**	-.033	.109**	-.031	-.043	.203**	.192**	.416**	1					
11. C Solidarity	.125**	.043	-.007	.101**	-.011	-.090*	.060	.258**	.462**	.406**	1				
12. V. Assoc.	.223**	.214**	.007	.034	.033	-.026	.104**	.295**	.261**	.211**	.285**	1			
13. ISC	.082*	.005	-.054	.002	-.049	-.113**	.067	.037	.162**	.144**	.201**	.031	1		
14. Rep. Child.	-.019	-.030	.044	-.054	.031	.048	.048	.084*	.257**	.088*	.106**	.175**	.072	1	
15. FSC	.100*	.019	.024	.019	-.064	.002	.056	.040	.119**	.122**	.214**	.088*	.199**	.007	1

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed). HS Comp. = high school completion, Not in Work = not in workforce, Prop. Victim = property victimization, Unsafe Neigh. = unsafe perception of the neighborhood, Gen. Neigh. = general neighboring, Def. Neigh. = defensive neighboring, C. Solidarity = community solidarity, V. Assoc. = presence of voluntary associations, ISC = informal social control, Rep. Child. = reprimanding neighborhood children.

Table 15. Change in Prison Admission Rates on Physical and Human Capital by Gender (Individual-level)

		Income[a]	HS Completion[b]	Not in Workforce[b]	Well-being[a]	Property Victimization[b]	Unsafe Perception of the Neighborhood[a]
Females							
Change in Admission Rate '92-'94		-0.068*	0.993	0.982	-0.010	0.981	-0.004
		(.038)	(.930, 1.059)	(.953, 1.014)	(.007)	(0.917,1.048)	(.003)
Intercept		4.366***	3.441***	0.175***	2.803***	0.414***	0.616***
		(.235)	(2.114, 5.602)	(.119, .258)	(.066)	(0.262,0.654)	(.026)
Variance Components:							
Individual-level		4.017	0.490	0.339	0.439	0.830	0.059
Neighborhood-level		0.100**	4.053***	12.467***	0.000	0.204	0.000
Males							
Change in Admission Rate '92-'94		-0.046	1.106**	0.970	-0.002	0.985	-0.000
		(.036)	(1.019, 1.201)	(.915, 1.029)	(.008)	(.945, 1.027)	(.004)
Intercept		3.928***	3.322***	0.277***	2.996***	0.301***	0.419***
		(.484)	(2.196, 5.025)	(.135, .569)	(.101)	(.172, .528)	(.052)
Variance Components:							
Individual-level		3.961	0.271	0.090	0.389	0.797	0.083
Neighborhood-level		0.264***	3.742***	30.217***	0.023***	0.949*	0.003***
Equality of Coefficients Tests	Clogg Test (z)	-0.42	--	--	0.01	--	-0.80
	Separate Model – Interaction	--	1.019 (0.965, 1.076)	1.010 (.0924, 1.104)	--	0.982 (0.892, 1.082)	--

*p<.10, **p<.05, ***p<.01. [a]Linear regression; fixed effects are reported with robust standard errors in parentheses. [b]Over-dispersed Bernoulli regression with error terms included; odds ratios are reported with confidence intervals in parentheses. Models include change in prison admissions, concentrated disadvantage, and residential mobility at the neighborhood-level, as well as age, race, homeowner, and presence of children within the household at the individual-level. Change in prison admissions, concentrated disadvantage, residential mobility, and age are centered on their grand mean. Race, homeowner, and presence of children within the household are left uncentered. n= 700 individuals nested within 30 neighborhoods.

Table 16. Change in Prison Admission Rates on Social Capital by Gender (Individual-

		Marriage[b]	Social Ties[a]	General Neighboring[a]	Defensive Neighboring[a]	Community Solidarity[a]	Presence of Voluntary Associations[a]
Females							
Change in Admission Rate '92-'94		0.999	-0.194	0.002	-0.001	-0.016	-0.050**
		(.946, 1.055)	(.140)	(.004)	(.004)	(.016)	(.022)
Intercept		0.522**	6.134***	0.531***	0.681***	2.717***	2.491***
		(.282, .968)	(1.386)	(.036)	(.037)	(.080)	(.291)
Variance Components:							
Individual-level		0.850	167.866	0.087	0.096	0.351	3.859
Neighborhood-level		1.520***	0.053	0.001	0.004***	0.029***	0.409***
Males							
Change in Admission Rate '92-'94		0.981	-0.152	-0.008**	-0.006*	-0.015*	-0.062***
		(.927, 1.037)	(.161)	(.003)	(.004)	(.010)	(.022)
Intercept		0.443***	6.156***	0.416***	0.569***	2.496***	2.429***
		(.248, .792)	(1.766)	(.061)	(.051)	(.122)	(.276)
Variance Components:							
Individual-level		0.880	281.266	0.085	0.081	0.330	3.205
Neighborhood-level		0.142**	0.369	0.000	0.000	0.018***	0.036
Equality of Coefficients Tests	Clogg Test (z)	--	-0.20	2.00**	0.88	-0.05	0.03
	Separate Model – Interaction Term	0.990 (.0949, 1.033)	--	--	--	--	--

*p<.10, **p<.05, ***p<.01. [a]Linear regression; fixed effects are reported with robust standard errors in parentheses. [b]Over-dispersed Bernoulli regression with error terms included; odds ratios are reported with confidence intervals in parentheses. Models include change in prison admissions, concentrated disadvantage, and residential mobility at the neighborhood-level, as well as age, race, homeowner, and presence children within the household at the individual-level. Change in prison admissions, concentrated disadvantage, residential mobility, and age are centered on their grand mean. Race, homeowner, and presence of children within the household are left uncentered. n= 700 individuals nested within 30 neighborhoods.

Table 17. Change in Prison Admission Rates on Social Control by Gender (Individual-level)

		Informal Social Control[a]	Reprimanding Neighborhood Children[b]	Initiating Formal Social Control[a]
Females				
Change in Admission Rate '92-'94		-0.006	1.008	0.000
		(.005)	(.950, 1.069)	(.002)
Intercept		0.573***	0.722	0.947***
		(.044)	(.421, 1.238)	(.018)
Variance Components:				
Individual-level		0.123	0.851	0.027
Neighborhood-level		0.001*	0.514**	0.000
Males				
Change in Admission Rate '92-'94		0.001	1.001	-0.006**
		(.003)	(.945, 1.060)	(.002)
Intercept		0.579***	0.376***	0.942***
		(.044)	(.210, .674)	(.029)
Variance Components:				
Individual-level		0.135	0.756	0.029
Neighborhood-level		0.000	1.292*	0.000
Equality of Coefficients Tests	Clogg Test (z)	-1.20	--	2.12**
	Separate Model – Interaction Term	--	1.024 (0.954, 1.099)	--

*p<.10, **p<.05, ***p<.01. [a]Linear regression; fixed effects are reported with robust standard errors in parentheses. [b]Over-dispersed Bernoulli regression with error terms included; odds ratios are reported with confidence intervals in parentheses. Models include change in prison admissions, concentrated disadvantage, and residential mobility at the neighborhood-level, as well as age, race, homeowner, and presence children within the household at the individual-level. Change in prison admissions, concentrated disadvantage, residential mobility, and age are centered on their grand mean. Race, homeowner, and presence of children within the household are left uncentered. n=700 individuals nested within 30

Table 18. Testing for Mediation: The Relationship between Possible Mediating Variables and Men's Initiation of Formal Social Control (Individual-level)

	Female Aggregated Potential Mediators			Male Aggregated Potential Mediators		
	Marriage	Social Ties	Community Solidarity	Presence of Voluntary Associations	General Neighboring	Defensive Neighboring
Mediator	0.095	0.007**	0.039*	-0.003	0.067	0.031
	(.073)	(.003)	(.025)	(.011)	(.096)	(.082)
Intercept	0.944***	0.949***	0.950***	0.945***	0.949***	0.946***
	(.029)	(.027)	(.031)	(.029)	(.028)	(.030)
Variance Components:						
Individual-level	0.028	0.029	0.029	0.029	0.029	0.029
Neighborhood-level	0.001*	0.000	0.001*	0.001**	0.001*	0.001**

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include a potential neighborhood-level mediator, as well as age, race, homeowner, and presence children within the household at the individual-level. The potential mediator and age are centered on their grand mean, all other variables are uncentered.

Table 19. Possible Mediators of the Relationship between Change in Prison Admission Rates and Men's Initiation of Formal Social Control (Individual-level)

	Model 1	Model 2	Model 3
Change in Admission Rate '92-'94	-0.006**	-0.005**	-0.006*
	(.002)	(.002)	(.003)
Intercept	0.942***	0.943***	0.942***
	(.029)	(.028)	(.030)
Potential Neighborhood-level Mediator(s):			
Social Ties		0.003	
(female aggregated)		(.003)	
Community Solidarity			-0.000
(female aggregated)			(.040)
Variance Components:			
Individual-level	0.029	0.029	0.029
Neighborhood-level	0.000	0.000	0.000

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage and residential mobility at the neighborhood-level, as well as age, race, homeowner, and presence children within the household at the individual-level. All variables are centered on their grand mean except black, homeowner, and presence of children within the household. n= 274 individuals nested within 30 neighborhoods.

Table 20. Change in Prison Release Rates on Physical and Human Capital by Gender (Individual-level)

		Income[a]	HS Completion[b]	Not in Workforce[b]	Well-being[a]	Property Victimization[b]	Unsafe Perception of the Neighborhood[a]
Females							
Change in Release Rate '92-'94		-0.011	0.984***	0.982	0.004	0.972***	0.004***
		(.014)	(.972, .995)	(.947, 1.018)	(.007)	(.953, .991)	(.001)
Intercept		4.349***	3.421***	0.181***	2.792***	0.399***	0.609***
		(.251)	(2.127,	(.122, .268)	(.061)	(.249, .639)	(.027)
Variance Components:							
Individual-level		4.025	0.495	0.340	0.440	0.832	0.059
Neighborhood-level		0.159***	3.791***	12.274***	0.000	0.090	0.000
Males							
Change in Release Rate '92-'94		-0.036	0.971	1.008	-0.010	0.990	-0.001
		(.032)	(.915, 1.029)	(.966, 1.051)	(.008)	(.959, 1.023)	(.004)
Intercept		3.870***	3.335***	0.285***	2.983***	0.292***	0.418***
		(.491)	(2.103,	(.139, .583)	(.098)	(.169, .505)	(.051)
Variance Components:							
Individual-level		3.943	0.271	0.091	0.390	0.801	0.083
Neighborhood-level		0.301***	3.812***	35.193***	0.018***	0.845*	0.003***
Equality of Coefficients Tests	Clogg Test (z)	0.72	--	--	0.22	--	1.25*
	Separate Model – Interaction Term	--	0.993 (.0967, 1.019)	0.968 (0.914, 1.024)	--	0.987 (0.945, 1.031)	--

*p<.10, **p<.05, ***p<.01. [a]Linear regression; fixed effects are reported with robust standard errors in parentheses. [b]Over-dispersed Bernoulli regression with error terms included; odds ratios are reported with confidence intervals in parentheses. Models include change in prison releases, concentrated disadvantage, and residential mobility at the neighborhood-level, as well as age, race, homeowner, and presence children within the household at the individual-level. Change in prison releases, concentrated disadvantage, residential mobility, and age are centered on their grand mean. Race, homeowner, and presence of children within the household are left uncentered. n=700 individuals nested within 30 neighborhoods.

Table 21. Change in Prison Release Rates on Social Capital by Gender (Individual-level)

		Marriage[b]	Social Ties[a]	General Neighboring[a]	Defensive Neighboring[a]	Community Solidarity[a]	Presence of Voluntary Associations[a]
Females							
Change in Release Rate '92-'94		1.006	0.032	0.003	0.002	-0.003	-0.044**
		(.978, 1.034)	(.062)	(.002)	(.003)	(.004)	(.020)
Intercept		0.520**	5.986***	0.528***	0.679***	2.715***	2.504***
		(.280, .965)	(1.300)	(.035)	(.036)	(.082)	(.298)
Variance Components:							
Individual-level		0.850	168.397	0.087	0.096	0.352	3.855
Neighborhood-level		1.514***	0.062	0.000	0.004***	0.032***	0.379***
Males							
Change in Release Rate '92-'94		1.025	-0.143	-0.001	-0.001	0.004	-0.030
		(.982, 1.070)	(.179)	(.004)	(.003)	(.007)	(.021)
Intercept		0.442***	5.918***	0.412***	0.563***	2.499***	2.361***
		(0.246, 0.794)	(1.841)	(.059)	(.054)	(.119)	(.295)
Variance Components:							
Individual-level		0.882	281.172	0.086	0.082	0.328	3.180
Neighborhood-level		0.201**	0.360	0.000	0.000	0.024***	0.112*
Equality of Coefficients Tests	Clogg Test (z)	--	0.92	1.00	0.75	-0.88	-0.48
	Separate Model – Interaction Term	0.980 (.0940, 1.021)	--	--	--	--	--

*p<.10, **p<.05, ***p<.01. [a]Linear regression; fixed effects are reported with robust standard errors in parentheses. [b]Over-dispersed Bernoulli regression with error terms included; odds ratios are reported with confidence intervals in parentheses. Models include change in prison releases, concentrated disadvantage, and residential mobility at the neighborhood-level, as well as age, race, homeowner, and presence children within the household at the individual-level. Change in prison releases, concentrated disadvantage, residential mobility, and age are centered on their grand mean. Race, homeowner, and presence of children within the household are left uncentered. n=700 individuals nested within 30 neighborhoods.

Table 22. Change in Prison Release Rates on Social Control by Gender (Individual-level)

		Informal Social Control[a]	Reprimanding Neighborhood Children[b]	Initiating Formal Social Control[a]
Females				
Change in Release Rate '92-'94		-0.003*	1.002	0.002*
		(.002)	(.965, 1.040)	(.001)
Intercept		0.575***	0.719	0.945***
		(.044)	(.417, 1.241)	(.019)
Variance Components:				
Individual-level		0.124	0.558**	0.027
Neighborhood-level		0.000*	0.444**	0.000
Males				
Change in Release Rate '92-'94		0.009***	1.010	-0.002
		(.003)	(.953, 1.070)	(.001)
Intercept		0.587***	0.378***	0.938***
		(.039)	(.211, .675)	(.031)
Variance Components:				
Individual-level		0.133	0.755	0.028
Neighborhood-level		0.000	1.221*	0.001*
Equality of Coefficients Tests	Clogg Test (z)	-3.33***	--	2.86***
	Separate Model – Interaction Term	--	0.976 (0.899, 1.059)	--

*p<.10, **p<.05, ***p<.01. [a]Linear regression; fixed effects are reported with robust standard errors in parentheses. [b]Over-dispersed Bernoulli regression with error terms included; odds ratios are reported with confidence intervals in parentheses. Models include change in prison releases, concentrated disadvantage, and residential mobility at the neighborhood-level, as well as age, race, homeowner, and presence children within the household at the individual-level. Change in prison releases, concentrated disadvantage, residential mobility, and age are centered on their grand mean. Race, homeowner, and presence of children within the household are left uncentered. n=700 individuals nested within 30 neighborhoods.

Table 23. Testing for Mediation: The Relationship between Possible Mediating Variables and Women's Forms of Social Control (Individual-level)

	Female Aggregated Potential Mediators		Male Aggregated Potential Mediators
	Unsafe Perception of the Neighborhood	Presence of Voluntary Associations	Not in Workforce
Women's Informal Social Control			
Mediator	-0.160	0.038*	-0.065
	(.197)	(.022)	(.052)
Intercept	0.561***	0.565***	0.558***
	(.048)	(.046)	(.049)
Variance Components:			
Individual-level	0.124	0.123	0.124
Neighborhood-level	0.002**	0.002*	0.002**
Women's Initiation of Formal Social Control			
Mediator	-0.183**	-0.005	-0.001
	(.084)	(.011)	(.030)
Intercept	0.947***	0.945***	0.945***
	(.019)	(.020)	(.019)
Variance Components:			
Individual-level	0.027	0.027	0.027
Neighborhood-level	0.000	0.000	0.000
Men's Informal Social Control			
Mediator	0.054	-0.041**	0.232*
	(.230)	(.019)	(.144)
Intercept	0.570***	0.571***	0.580***
	(.037)	(.040)	(.039)
Variance Components:			
Individual-level	0.136	0.134	0.134
Neighborhood-level	0.000	0.000	0.000

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include a potential neighborhood-level mediator, as well as age, race, homeowner, and presence children within the household at the individual-level. The potential mediator and age are centered on their grand mean, all other variables are uncentered.

Table 24. Possible Mediators of the Relationship between Change in Prison Release Rates and Forms of Social Control (Individual-level)

Women's Informal Social Control (n=426)			
	Model 1	Model 2	
Change in Release Rate '92-'94	-0.003*	-0.001	
	(.002)	(.002)	
Intercept	0.575***	0.573***	
	(.044)	(.043)	
Potential Neighborhood-level Mediator(s):			
Presence of Voluntary Associations		0.038*	
(female aggregated)		(.023)	
Variance Components:			
Individual-level	0.124	0.124	
Neighborhood-level	0.000*	0.000*	
Women's Initiation of Formal Social Control (n=426)			
	Model 1	Model 2	
Change in Release Rate '92-'94	0.002*	0.002***	
	(.001)	(.001)	
Intercept	0.945***	0.947***	
	(.019)	(.018)	
Potential Neighborhood-level Mediator(s):			
Unsafe Perception of the Neighborhood		-0.214**	
(female aggregated)		(.102)	
Variance Components:			
Individual-level	0.027	0.027	
Neighborhood-level	0.000	0.000	
Men's Informal Social Control (n=274)			
	Model 1	Model 2	Model 3
Change in Release Rate '92-'94	0.009***	0.006*	0.008**
	(.003)	(.003)	(.003)
Intercept	0.587***	0.594***	0.590***
	(.039)	(.043)	(.039)
Potential Neighborhood-level Mediator(s):			
Presence of Voluntary Associations		-0.039*	
(female aggregated)		(.023)	
Not in Workforce			0.225
(male aggregated)			(.150)
Variance Components:			
Individual-level	0.133	0.132	0.132
Neighborhood-level	0.000	0.000	0.000

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage and residential mobility at the neighborhood-level, as well as age, race, homeowner, and presence children within the household at the individual-level. All variables are centered on their grand mean except black, homeowner, and presence of children within the household.

Appendix A. Change in Prison Admission and Release Rates on Physical, Human, and Social Capital and Social Control by Gender, excluding "low male respondent neighborhoods" (Neighborhood-level)

	Income	HS Completion	Not in Workforce	Well-being	Property Victimization	Unsafe Perception of Neighborhood
Change in Admission Rate '92-'94	-.036	-.003	-.003	.004	-.001	-.003
	(.050)	(.008)	(.005)	(.012)	(.006)	(.005)
Constant	5.846***	.825***	.089***	3.010***	.245***	.432***
	(.216)	(.033)	(.024)	(.054)	(.025)	(.022)
R^2	.396	.218	.242	.044	.027	.074
Change in Release Rate '92-'94	-.011	-.011	-.006	-.024**	.002	.001
	(.051)	(.007)	(.005)	(.012)	(.006)	(.005)
Constant	5.855***	.829***	.092***	3.017***	.244***	.432***
	(.219)	(.032)	(.023)	(.050)	(.025)	(.022)
R^2	.384	.277	.276	.181	.032	.064
	Marriage	Social Ties	General Neigh.	Defensive Neigh.	Community Solidarity	Presence of Vol. Assoc.
Change in Admission Rate '92-'94	-.006	-.141	-.010*	-.010**	-.019	-.053*
	(.008)	(.265)	(.005)	(.004)	(.012)	(.030)
Constant	.574***	8.751***	.581***	.748***	2.825***	2.729***
	(.034)	(1.157)	(.022)	(.019)	(.054)	(.130)
R^2	.465	.023	.162	.402	.148	.228
Change in Release Rate '92-'94	.010	-.277	-.002	-.002	.003	-.039
	(.008)	(.266)	(.006)	(.005)	(.013)	(.031)
Constant	.571***	8.870***	.584***	.750***	2.827***	2.751***
	(.033)	(1.141)	(.024)	(.021)	(.057)	(.135)
R^2	.487	.054	.027	.264	.064	.179
	Informal Social Control	Reprima-nding Neighbo-rhood Children	Initiating Formal Social Control			
Change in Admission Rate '92-'94	.001	-.001	-.005*			
	(.005)	(.009)	(.003)			
Constant	.554***	.432***	.942***			
	(.023)	(.041)	(.012)			
R^2	.049	.305	.159			
Change in Release Rate '92-'94	.009*	-.005	-.001			
	(.005)	(.010)	(.003)			
Constant	.551***	.434***	.943***			
	(.021)	(.041)	(.013)			
R^2	.153	.314	.023			

*p<.10, **p<.05, ***p<.01, n=28. Unstandardized regression coefficients are reported; standard errors in Models include concentrated disadvantage and residential mobility.

Appendix B. Change in Prison Admission and Release Rates on Physical and Human Capital by Gender with Additional Controls (Neighborhood-level)

	Income	HS Completion	Not in Workforce	Well-being	Property Victimization	Unsafe Perception of Neighborhood
Females						
Change in Admission Rate '92-'94	-.080**	-.002	-.007	-.006	-.003	-.003
	(.035)	(.006)	(.007)	(.008)	(.005)	(.003)
Constant	5.033***	.692***	.115	2.955***	.148**	.583***
	(.456)	(.084)	(.088)	(.099)	(.070)	(.041)
R^2	.629	.376	.107	.564	.621	.207
Change in Release Rate '92-'94	-.017	-.003	-.007	.004	-.001	.004*
	(.025)	(.004)	(.004)	(.005)	(.004)	(.002)
Constant	5.252***	.710***	.164*	2.945***	.158**	.568***
	(.514)	(.086)	(.088)	(.102)	(.072)	(.041)
R^2	.556	.384	.163	.563	.617	.279
Males						
Change in Admission Rate '92-'94	-.057	-.004	.000	.004	-.002	-.003
	(.054)	(.008)	(.009)	(.014)	(.006)	(.007)
Constant	5.967***	.784***	.347***	3.159***	.206**	.538***
	(.706)	(.104)	(.115)	(.187)	(.082)	(.091)
R^2	.444	.255	.320	.065	.090	.115
Change in Release Rate '92-'94	-.051	-.005	.009	-.006	-.005	.001
	(.035)	(.005)	(.006)	(.009)	(.004)	(.005)
Constant	6.335***	.821***	.297***	3.187***	.236***	.537***
	(.715)	(.106)	(.113)	(.191)	(.083)	(.094)
R^2	.464	.277	.387	.078	.141	.109

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage, residential mobility, total crime rate per 100 residents, and neighborhood population per 1,000 residents.

Appendix C. Change in Prison Admission and Release Rates on Social Capital by Gender with Additional Controls (Neighborhood-level)

	Marriage	Social Ties	General Neigh.	Defensive Neigh.	Community Solidarity	Presence of Vol. Assoc.
Females						
Change in Admission Rate '92-'94	-.015**	-.379***	-.002	-.008	-.023*	-.081**
	(.006)	(.134)	(.004)	(.005)	(.012)	(.038)
Constant	.564***	4.950***	.534***	.766***	2.995***	2.155***
	(.080)	(1.740)	(.048)	(.065)	(.155)	(.489)
R^2	.487	.310	.136	.327	.262	.307
Change in Release Rate '92-'94	-.003	.013	.002	-.001	-.006	-.049*
	(.005)	(.103)	(.002)	(.004)	(.008)	(.025)
Constant	.601***	5.478***	.524***	.784***	3.064***	2.552***
	(.091)	(2.070)	(.049)	(.071)	(.169)	(.513)
R^2	.377	.082	.156	.252	.170	.284
Males						
Change in Admission Rate '92-'94	-.008	-.204	-.010**	-.011***	-.017	-.061*
	(.007)	(.251)	(.005)	(.003)	(.013)	(.031)
Constant	.791***	8.728***	.670***	.820***	2.958***	2.165***
	(.094)	(3.251)	(.061)	(.039)	(.164)	(.406)
R^2	.609	.146	.310	.721	.187	.309
Change in Release Rate '92-'94	.004	-.112	-.002	-.001	.003	-.026
	(.005)	(.167)	(.003)	(.002)	(.009)	(.022)
Constant	.782***	9.665***	.697***	.844***	2.969***	2.406***
	(.098)	(3.367)	(.068)	(.050)	(.175)	(.437)
R^2	.595	.139	.188	.557	.127	.246

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage, residential mobility, total crime rate per 100 residents, and neighborhood population per 1,000 residents.

Appendix D. Change in Prison Admission and Release Rates on Social Control by Gender with Additional Controls (Neighborhood-level)

	Informal Social Control	Reprimanding Neighborhood Children	Initiating Formal Social Control
Females			
Change in Admission Rate '92-'94	-.012*	.005	.000
	(.006)	(.007)	(.002)
Constant	.519***	.521***	.923***
	(.082)	(.103)	(.031)
R^2	.178	.662	.275
Change in Release Rate '92-'94	-.004	-.002	.002
	(.005)	(.005)	(.002)
Constant	.551***	.515***	.919***
	(.087)	(.104)	(.030)
R^2	.074	.657	.305
Males			
Change in Admission Rate '92-'94	.002	-.003	-.006**
	(.006)	(.010)	(.003)
Constant	.611***	.285***	.924***
	(.090)	(.132)	(.036)
R^2	.111	.501	.333
Change in Release Rate '92-'94	.010**	-.009	.001
	(.004)	(.007)	(.002)
Constant	.582***	.311***	.931***
	(.081)	(.128)	(.039)
R^2	.277	.534	.198

*p<.10, **p<.05, ***p<.01. Unstandardized regression coefficients are reported; standard errors in parentheses. Models include concentrated disadvantage, residential mobility, total crime rate per 100 residents, neighborhood population per 1,000 residents, and lack of police response.

Appendix E. Change in Prison Admission and Release Rates on Physical and Human Capital by Gender with Additional Controls (Individual-level)

	Income[a]	HS Completion[b]	Not in Workforce[b]	Well-being[a]	Property Victimization[b]	Unsafe Perception of Neighborhood[a]
Females						
Change in Admission Rate '92-'94	-0.072**	0.963*	0.986	-0.007	0.984	-0.004
	(.034)	(.918, 1.011)	(.947, 1.026)	(.007)	(.933. 1.038)	(.003)
Intercept	4.317***	3.075***	0.177***	2.810***	0.361***	0.618***
	(.234)	(1.910, 4.951)	(.117, .268)	(.072)	(.212, .613)	(.027)
Variance Components:						
Individual-level	4.020	0.484	0.328	0.438	0.881	0.059
Neighborhood-level	0.079**	3.913***	14.970***	0.000	0.107	0.000
Change in Release Rate '92-'94	-0.008	0.988	0.980	0.004	0.976*	0.004***
	(.015)	(.970, 1.006)	(.941, 1.020)	(.006)	(.950, 1.004)	(.001)
Intercept	4.316***	3.152***	0.182***	2.800***	0.368***	0.609***
	(.245)	(1.984, 5.009)	(.120, .276)	(.063)	(.212, .642)	(.028)
Variance Components:						
Individual-level	4.031	0.487	0.322	0.438	0.873	0.059
Neighborhood-level	0.141***	3.882***	16.804***	0.000	0.108	0.000
Males						
Change in Admission Rate '92-'94	-0.050	1.095**	0.976	-0.001	1.000	0.003
	(.040)	(1.014, 1.183)	(.935, 1.018)	(.009)	(.958, 1.044)	(.004)
Intercept	3.996***	2.994***	0.278***	3.007***	0.311***	0.405***
	(.427)	(2.112, 4.244)	(.149, .520)	(.097)	(.184, .524)	(.050)
Variance Components:						
Individual-level	3.981	0.270	0.090	0.389	0.790	0.084
Neighborhood-level	0.172***	3.630***	30.758***	0.021***	0.829**	0.000**
Change in Release Rate '92-'94	-0.036	0.977	1.016	-0.011	0.994	-0.001
	(.034)	(.939, 1.017)	(.980, 1.054)	(.008)	(.964, 1.026)	(.004)
Intercept	3.933***	2.981***	0.286***	2.994***	0.308***	0.408***
	(.446)	(2.003, 4.436)	(.148, .553)	(.092)	(.184, .516)	(.049)
Variance Components:						
Individual-level	3.950	0.269	0.090	0.390	0.791	0.083
Neighborhood-level	0.229***	3.684***	35.781***	0.015***	0.823**	0.001**

*p<.10, **p<.05, ***p<.01. [a]OLS regression; fixed effects are reported with robust standard errors in parentheses. [b]Over-dispersed Bernoulli regression with error terms included; odds ratios are reported with confidence intervals in parentheses. Models include change in prison admissions/releases, concentrated disadvantage, residential mobility, population per 1,000 residents, and total crime rate per 100 residents at the neighborhood-level, as well as age, black, homeowner, and presence of children within the household at the individual-level. Change in prison admissions/releases, concentrated disadvantage, residential mobility, population per 1,000 residents, total crime rate per 100, and age are centered on their grand mean. Race, homeowner, and presence of children within the household are left uncentered. n= 700 individuals nested within 30 neighborhoods.

Appendix F. Change in Prison Admission and Release Rates on Social Capital by Gender with Additional Controls (Individual-level)

	Marriage[b]	Social Ties[a]	General Neighboring[a]	Defensive Neighboring[a]	Community Solidarity[a]	Presence of Voluntary Associations[a]
Females						
Change in Admission Rate '92-'94	1.011	-0.218	0.001	-0.002	-0.014	-0.060**
	(.957, 1.067)	(.154)	(.004)	(.004)	(.016)	(.024)
Intercept	0.560**	5.917***	0.528***	0.687***	2.712***	2.435***
	(.310, 1.012)	(1.515)	(.037)	(.038)	(.078)	(.286)
Variance Components:						
Individual-level	0.844	167.556	0.087	0.096	0.352	3.860
Neighborhood-level	1.452***	0.049	0.000	0.003***	0.026***	0.333***
Change in Release Rate '92-'94	1.002	0.051	0.003	0.001	-0.002	-0.037*
	(.977, 1.027)	(.068)	(.002)	(.003)	(.005)	(.023)
Intercept	0.558**	5.736***	0.521***	0.685***	2.712***	2.460***
	(.309, 1.010)	(1.370)	(.037)	(.037)	(.078)	(.302)
Variance Components:						
Individual-level	0.849	168.130	0.087	0.096	0.353	3.854
Neighborhood-level	1.401***	0.056	0.000	0.003***	0.028***	0.346***
Males						
Change in Admission Rate '92-'94	0.977	-0.237	-0.008***	-0.008***	-0.017*	-0.076***
	(.921, 1.037)	(.164)	(.003)	(.003)	(.010)	(.020)
Intercept	0.522**	7.159***	0.442***	0.595***	2.513***	2.479***
	(.312, .873)	(1.499)	(.050)	(.045)	(.118)	(.281)
Variance Components:						
Individual-level	0.877	278.070	0.083	0.079	0.330	3.187
Neighborhood-level	0.045***	0.122	0.000	0.000	0.014**	0.002
Change in Release Rate '92-'94	1.014	-0.145	-0.001	-0.002	0.003	-0.029
	(.974, 1.056)	(.166)	(.003)	(.003)	(.007)	(.022)
Intercept	0.512***	6.792***	0.432***	0.586***	2.512***	2.370***
	(0.302, 0.866)	(1.601)	(.051)	(.049)	(.116)	(.298)
Variance Components:						
Individual-level	0.877	278.513	0.084	0.080	0.328	3.180
Neighborhood-level	0.045***	0.148	0.000	0.000	0.022***	0.091**

*p<.10, **p<.05, ***p<.01. [a]OLS regression; fixed effects are reported with robust standard errors in parentheses. [b]Over-dispersed Bernoulli regression with error terms included; odds ratios are reported with confidence intervals in parentheses. Models include change in prison admissions/releases, concentrated disadvantage, residential mobility, population per 1,000 residents, and total crime rate per 100 residents at the neighborhood-level, as well as age, black, homeowner, and presence of children within the household at the individual-level. Change in prison admissions/ releases, concentrated disadvantage, residential mobility, population per 1,000 residents, total crime rate per 100, and age are centered on their grand mean. Race, homeowner, and presence of children within the household are left uncentered. n= 700 individuals nested within 30 neighborhoods.

Appendix G. Change in Prison Admission and Release Rates on Social Control by Gender with Additional Controls (Individual-level)

	Informal Social Control[a]	Reprimanding Neighborhood Children[b]	Initiating Formal Social Control[a]
Females			
Change in Admission Rate '92-'94	-0.007	1.010	0.000
	(.006)	(.951, 1.072)	(.002)
Intercept	0.572***	0.734	0.942***
	(.043)	(.422, 1.278)	(.017)
Variance Components:			
Individual-level	0.124	0.854	0.027
Neighborhood-level	0.000**	0.569***	0.000
Change in Release Rate '92-'94	-0.003	1.002	0.002*
	(.004)	(.962, 1.045)	(.001)
Intercept	0.574***	0.731	0.940***
	(.042)	(.419, 1.277)	(.018)
Variance Components:			
Individual-level	0.124	0.854	0.027
Neighborhood-level	0.000**	0.581***	0.000
Males			
Change in Admission Rate '92-'94	0.002	0.990	-0.007***
	(.003)	(.952, 1.029)	(.002)
Intercept	0.574***	0.378***	0.936***
	(.041)	(.193, .738)	(.030)
Variance Components:			
Individual-level	0.135	0.735	0.028
Neighborhood-level	0.000	1.971***	0.000
Change in Release Rate '92-'94	0.008***	0.974	-0.000
	(.003)	(.930, 1.021)	(.002)
Intercept	0.583***	0.382***	0.930***
	(.038)	(.192, .764)	(.031)
Variance Components:			
Individual-level	0.133	0.739	0.028
Neighborhood-level	0.000	2.139***	0.000*

*p<.10, **p<.05, ***p<.01. [a]OLS regression; fixed effects are reported with robust standard errors in parentheses. [b]Over-dispersed Bernoulli regression with error terms included; odds ratios are reported with confidence intervals in parentheses. Models include change in prison admissions/releases, concentrated disadvantage, residential mobility, population per 1,000 residents, total crime rate per 100 residents, and lack of police response at the neighborhood-level, as well as age, black, homeowner, and presence of children within the household at the individual-level. Change in prison admissions/releases, concentrated disadvantage, residential mobility, population per 1,000 residents, total crime rate per 100, lack of police response, and age are centered on their grand mean. Race, homeowner, and presence of children within the household are left uncentered. n= 700 individuals nested within 30 neighborhoods.