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INCARCERATION AND SOCIAL NETWORKS: UNDERSTANDING THE RELATIONSHIPS THAT SUPPORT REENTRY

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Abstract

Incarceration and Social Networks: Understanding the Relationships That Support Reentry

Joanna M. Weill

Previous research demonstrates that social support is essential for successful reentry into the community after incarceration. However, little research examines how incarceration itself impacts social support and how individuals with different incarceration histories have different experiences of social support. This dissertation examined how individuals' social networks, social support, and wellbeing are predicted by incarceration history. Formerly incarcerated men returning from jail and prison (*N* = 68) were interviewed in a procedure designed to collect information about their criminal justice histories, to map their social networks, to provide open-ended feedback about their reentry experience, and to collect a variety of other relevant demographic and scale measures. Analyses of the resulting data provided little evidence that an individual's most recent incarceration impacts their social network, social support, or wellbeing. However, conditions of individuals' previous and lifetime incarcerations did have significant predictive power. Individuals who were incarcerated for longer in prison in the past, incarcerated in any setting for longer in the past, incarcerated in any setting for longer throughout their lifetime, and/or incarcerated further from home throughout their lifetime were found to have less support available to them. Conditions of previous and lifetime incarceration also predicted alter closeness, the incarceration history of alters, and participant wellbeing. The relationships between previous and lifetime incarceration and these outcomes were not mediated by participants' prisonization or by their identification with people inside or people outside of prison and jail. Qualitative analyses provided additional information about support during reentry, including highlighting the physical and emotional distance created by incarceration, the important role that technology and social media plays in support after reentry, and the complicated nature of relationships with other individuals who have been incarcerated. These findings can be used by correctional facilities, probation and parole officers, and non-profit and government service providers to help determine which reentering

individuals are least likely to have support and close network members, and which individuals are most likely to have a greater prevalence of formerly incarcerated network members and poor wellbeing. Providing these individuals with additional reentry services has the potential to reduce recidivism and increase public safety.

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Chapter 1: Introduction

Beginning in the early 1980s, the number of individuals incarcerated in the United States rose dramatically, with the number incarcerated in the state prison system increasing 708% by 2008 (Pew Center on the States, 2010). At the end of 2014, more than 2.2 million adults were incarcerated in U.S. prisons and jails, and more than 6.8 million were under some form of correctional supervision (Kaeble, Glaze, Tsoutis, & Minton, 2016). Over the course of this increase crime rates decreased, but not at rates that were commensurate with the expansion of incarceration. Additionally, only a small portion of those reductions have been attributed to increased incarceration (National Research Council, 2014). Rather many researchers believe "that imprisonment is not simply a 'cost' but also a social experience that deepens illegal involvement" (Cullen, Jonson, & Nagin, 2011, p. 48S). It may create psychological changes in the prisoner (Haney, 2003; Haney, 2006), disrupt an individual's employment and personal life (Killias, Aebi, & Ribeaud, 2000), and embed prisoners in a "school of crime" by surrounding them with other criminals (Cullen et al., 2011).

The impact that imprisonment has on a person may depend on the conditions of their incarceration. Interviews of halfway house residents by Listwan, Sullivan, Agnew, Cullen, and Colvin (2013) found that, controlling for criminal propensity, self-reported negative prison environment and direct victimization during incarceration predicted recidivism. Findings on the impact of prison security level generally suggest that those assigned to the higher security prisons (typically harsher conditions) were more likely to recidivate, compared with similar individuals assigned to the lower security prisons (less harsh conditions) (Chen & Shapiro, 2007; Gaes & Camp, 2009; Lerman, 2013).

After their incarceration, many individuals are likely to recidivate, or to return to jail or prison. Recidivism rates have remained high with 67.8% of state prisoners in 30 states rearrested within three years (Durose, Cooper, & Snyder, 2014). Recidivism is even thought to be a driving force of increased incarceration rates, particularly within California (Petersilia, 2003). Petersilia (2003) demonstrated that increased incarceration failed to decrease

recidivism, with rearrests increasing by 5% between 1983 and 1994 and larger proportions of serious crime attributed to recently released prisoners.

Together these findings indicate that the conditions of incarceration may have a long-term negative impact on a person. Therefore, to effectively decrease crime, violence, and recidivism and to create a safer society, it is critically important to examine the nature of incarceration and the impact that it has on prisoners.

One avenue by which prison may impact individuals is though separating individuals from society physically and psychologically. Researchers know that relationships and social support from people outside of prison are essential for successful reentry (see Harding, Wyse, Dobson, & Morenoff, 2014; Hepburn & Griffin, 2004; Nelson, Deess, & Allen, 1999; Petersilia, 2003; Western, Braga, Davis, & Sirois 2015), but there is little research that examines how the separation of prisoners from society impacts this necessary social support. The physical and psychological separation may harm the relationships that researchers say are essential for successful reentry, while simultaneously embedding individuals in a network of criminally involved others.

In this dissertation, I will look at how individuals' social networks are impacted by their incarcerations. Specifically, I will compare the impact of two different correctional settings: prisons and jails. While people in county jail are typically incarcerated for short periods of time, close to their communities, people in state prison typically serve longer sentences, further from their communities. These different conditions, as well as the potentially greater psychological impact of prison, may impact incarcerated prisoners' abilities to maintain a network of supportive relationships and increase their embeddedness in a network of criminal others. Subsequently these networks may provide less support and may lead to decreased wellbeing.

The remaining pages of Chapter 1 review the literature and theory underlying my hypotheses. This research is based on the idea that incarcerated individuals, especially those in prison, come to be viewed as outgroup members through their psychological and physical

separation from those outside of prison. I also outline the difficultly that these individuals face in entering society and highlight the research that demonstrates that social support is necessary for reentry success. Then in Chapter 2 I provide background information about social network analysis, a method and a theory of relationships and behavior, around which my research is designed. In Chapter 3 I state my hypotheses, describe the methodology and tools used to conduct this study, and describe the samples from which my data were collected. Chapter 4 describes the analyses of my quantitative data and the results of these analyses. Chapter 5 in an analysis of the open-ended qualitative questions asked of participants. Chapter 6 provides an in-depth discussion of my results, integrates the quantitative and qualitative analyses, and discusses the practical implications of these findings. Finally, Chapter 7 includes concluding thoughts about the study, limitations of the research, and suggested avenues for future research.

Separation of Prisoners from Society

The process of separating people who commit crime from the rest of society begins before incarceration, when society considers how to punish those who commit crime. After breaking a law, individuals who commit crime are often considered outside of what Opotow (1990) terms society's "scope of justice," and therefore, harming them is seen as "acceptable." Considered a separate, "unsympathetic" class of people, they also become less understandable. While the fundamental attribution error says that people overestimate the influence of disposition on behavior and underestimate the influence of the situation, the Ultimate Attribution Error expands upon this, explaining that when an outgroup member commits a negative act there is an even greater likelihood that behavior will be is attributed to disposition (Pettigrew, 1979). As a group defined by the commission of negative acts the behavior of criminals will be even more misunderstood and misattributed to disposition than the behavior of other outgroups. Because of this, criminals could be considered the "ultimate outgroup". This outgroup status allows us to morally disengage and subject prisoners to

punishment and conditions that would otherwise be considered unacceptable (Weill & Haney, under review).

Incarceration then further distances prisoners from the rest of society. In Erving Goffman's book, *Asylums* (1961), he describes prisons as one type of "total institution", which he defines as "a place of residence and work where a large number of like-situated individuals, cut off from the wider society for an appreciable period of time, together lead an enclosed, formally administered round of life" (p. xiii). Once in total institutions, physical barriers keep prisoners inside and also serve to psychologically separate them from society at large and their family and friends who connect them with the outside. In his extensive study of a New Jersey maximum-security prison, Sykes (1958) describes the prison similarly to Goffman, calling it "a society of captives," a world with its own social system, hidden from the larger society.

Physical separation. The physical separation of prisoners from the larger society occurs geographically and temporally; the distance between the institution where a prisoner is incarcerated and their community and the amount of time they are incarcerated can both be measured to quantify physical separation. Prisoners now serve longer sentences than they did in the past (Petersilia, 2003); state prisoners in 2009 served an average of three years in custody, which was a 36% increase since 1990 (Pew Center on the States, 2012). Individuals in prison are also incarcerated far from their homes. Male prisoners are incarcerated an average of 100 miles from their families, while women are incarcerated an average of 160 miles from theirs (Travis, McBride, & Solomon, 2005).

Contact and relationships can be difficult to maintain when people are physically separated. Researchers outside the field of criminal justice have demonstrated the importance geographical closeness and contact to relationships. Unsurprisingly, contact decreases as the geographical distance between individuals increases (McPherson, Smith-Lovin, & Cook, 2001; Tillema, Dijst, & Schwanen, 2010). This occurrence, known as "distance decay," occurs for both face-to-face contact and electronic communication, including

telephone calls (Tillema et al., 2010). This contact is important to maintaining the quality of relationships. Lawton, Silverstein, and Bengtson (1994) found that when adult children lived within an hour of their mothers or fathers they had more frequent contact with them and subsequently received more affection from their parents. For mothers, the relationship between contact and affection was reciprocal, with greater contact predicting greater affection, which in turn predicted more contact. Additionally, although modern communications like telephone and email reduce the impact of geographical distance, these technologies are often inaccessible or more difficult to access for incarcerated individuals (McPherson, Smith-Lovin, & Cook, 2001). These findings have important implications for prisoners who are trying to maintain relationships with family members outside of prison, especially when individuals serve long sentence, far from their homes.

Although criminal justice professionals and researchers often presume the impact of the physical separation of prisoners from their friends, family, and communities, there is little research that empirically examines this question. Some information can be inferred from research on prison visitation. Two studies conducted in the Midwestern United States found that the greater the number of previous incarcerations a prisoner has experienced, the fewer visits they will receive during their current incarceration (Connor & Tewksbury, 2015; Tewksbury & Connor, 2012). For each additional previous incarceration, prisoners received an average of two fewer visits (Tewksbury & Connor, 2012). More specifically, for each incarceration, they received 0.7 fewer visits from their children, 1.6 fewer visits from their parents, 0.5 fewer visits from their siblings, and 0.8 fewer visits from extended family (Connor & Tewksbury, 2015). (The number of incarcerations did not significantly predict spouse/partner and friend visits.) Tewksbury and Connor (2012) found that the number of incarcerations itself, rather than the duration of sentences, predict these changes. However, research in a Tajikistan prison found that the duration of the current incarceration did predict decreases in the number of visits from both family and friends (Winetsky, Almukhamedov,

Pulatov, Vezhnina, Dooronbekova, & Zhussupov, 2013). Over this time, prisoners began to rely more on other inmates in the stead of family and friends (Winetsky et al., 2013).

These visits are important because they are associated with decreased risk of recidivism (Bales & Mears, 2008; Duwe & Clark, 2013). In Florida, Bales and Mears (2008) found that the odds that prisoners who received visits would recidivate were 30.7% lower than the odds for prisoners who received no visits, and in Minnesota, Duwe and Clark (2013) found that prisoners who received visits were 25% less likely to have their parole revoked on a technical violation. Visits from fathers, siblings, in-laws, and clergy were especially beneficial (Duwe & Clark, 2013). Visits closer to the time of release are more likely to reduce recidivism, and for each visit a prisoner received, the odds of them recidivated decreases by 3.8% (Bales & Mears, 2008). On the other hand, individuals, like probationers, who serve their punishments in their communities and homes, without the physical barriers to contact and visitation during incarceration, are less likely to recidivate compared with those who had severed all or part of their time in prison, even when controlling for other individual-level factors (Kubrin & Stewart, 2006).

But during long incarcerations, far from home, contact with family and friend can be difficult to maintain. When male prisoners returning to Chicago were surveyed, more than two-thirds reported that staying in contact with family during incarceration was difficult (La Vigne, Naser, Brooks, & Castro, 2005). All contact with the outside world, including letters, visits, and phone calls, must be approved by prison authorities (Cohen & Taylor, 1972), and “tough on crime” policies have made visiting more difficult (Petersilia, 2003). Among released surveyed prisoners in Florida, 58% reported receiving no visits during their incarceration (Bales & Mears, 2008). The greatest barriers to maintaining contact are the distance that must be traveled for visits and expensive phone calls (La Vigne et al., 2005). Prisons are often located in remote locations far from the urban areas in which many visitors live (Duwe & Clark, 2013). In a study of family of recently released prisoners in Chicago, 75% said physical distance was a barrier to visiting their incarcerated family (Naser & Visher, 2006). The

median reported duration of travel to visit prisons was three hours, and for those who did not visit, the median was four hours. Additionally, transportation created challenges to visitation for 34% of respondents (Naser & Visher, 2006). Visits often need to be planned, with one survey of prison visitors finding that 50% of visits were planned more than a week in advance (Tewksbury, & DeMichele, 2005).

With these barriers to contact, it is not surprising that soon to be released inmates who have cumulatively spent 10 or more years incarcerated since the age of 18 are less likely to have supportive family and a trusted person with whom they can talk (Wolff, Shi, & Schumann, 2012). Researchers have also found that incarceration increases the risk of divorce and separation (Apel, Blokland, Nieuwbeerta, & van Schellen, 2010; Lopoo & Western, 2005), due to the separation experienced during an incarceration (Massoglia, Remster, & King, 2011). This research in conjunction with the research on visitation suggests that separation during incarceration could affect social support.

It is worth noting that one recent study did not find support for a relationship between incarceration history and post-incarceration support. Western, Braga, Davis, and Sirois (2015) found that those who served more than three years in prison and less than three years in prison and those who spent more than 50% of their adult life incarcerated and less than 50% of their adult like incarcerated did not have significantly different outcomes in terms of family support, employment, housing, and public assistance. This inconsistency requires further examination.

Psychological separation. Prisoners are also psychologically changed by incarceration in ways that may serve to further differentiate them from their friends and family outside of prison. A new prisoner faces many harsh prison conditions, including a "mortification" of identity (Goffman, 1961), dehumanization by guards (Haney, Banks, & Zimbardo, 1973; Weill & Haney, under review), and a dangerous environment (Haney, 2012; McCorkle, 1992). The prisoner's physical and psychological survival relies on their ability to cope with these stressful experiences, and over time, prisoners adjust to the stressful prison

environment. Levels of depression and anxiety decrease the longer a prisoner is incarcerated (Zamble, 1992), as do the number of disruptive infractions received (Wright, 1991). The process by which prisoners adjust to and cope with the stressors of incarceration has been called “prisonization” (Clemmer, 1958). These adaptations can be dysfunctional in the outside world, but are normal ways to cope with the abnormal environment in a prison (Haney, 2012). Haney and Zimbardo (1998) call such behaviors “situationally appropriate.” The behaviors associated with prisonization are consequences of “dynamics of desperation,” where the prison environment leads prisoners to make short-term choices that help them to survive but have long-term negative consequences (Haney, 2006). While not all prisoners are irreversibly harmed by these adaptations, most do experience some long-term consequences (Haney, 2003). This is particularly true in overcrowded modern U.S. prisons, where these adaptations are especially necessary for survival.

The resulting behavior may change how prisoners and former prisoners interact with the people with whom they were once close (Haney, 2003). After incarceration, everyday social interaction often becomes a discomforting experience (Western et al., 2015); recently released prisoners report being uncomfortable in crowded spaces and on public transportation, and 40% were socially anxious during their first week post-release. Friends and family outside may try to sympathize but cannot really understand their loved one’s incarceration experience (Cohen & Taylor, 1972).

Haney (2003) outlines six notable adjustments to prison that may be problematic upon release. The first is a dependence on the institutional structure. Prisoners must give up their self-autonomy and put (almost) all decision-making power in the hands of the prison staff or face punishment. Once released they are then expected to control and organize their own life, even though this ability was stripped from them in the preceding months or years. Alternatively, they may only know how to control their own behavior while within the strict structure of a prison or jail. Second, due to the dangerous, exploitive nature of many prisons, the prisoner may become hypervigilant and distrustful of other people. In prison, this helps

the prisoner to be ever-ready to protect himself. Outside of prison this makes it difficult to forge and maintain relationships and creates discomfort in social settings. Third, emotional over-control and alienation may be adopted so that the prisoner does not appear weak to other prisoners, and fourth, social withdrawal from other prisoners may provide a sense of safety within the dangerous prison environment. However, both emotional over-control and social withdrawal may hinder individuals in their post-incarceration relationships, by making it difficult to be close to and receive emotional support from others. Fifth, incarceration may result in diminished self-worth due to the deprivations and dehumanization in prison that perpetually remind the incarcerated of their inmate status. Finally, the prisoner may incorporate the prison's culture of exploitation and violence into his own worldview. Haney (2003) explains that this culture may give a prisoner "meaningfulness" in an otherwise meaningless world, but provides obvious dangers to relationships and legal behavior once released.

Together the physical separation and psychological separation may further separate criminals from a society that already sees them as "bad" and "different." Freeman (1978) argues that spatially separating "lower status" individuals from "higher status" enables the perpetuation of this status differential. Therefore, the separation of criminals from society may, in itself, allow the perpetuation of inequality.

Risk for Recidivism Upon Reentry

After a prolonged physical and psychological separation from society, reintegration into the community is not easy. The former prisoner must secure housing, food, and income, while desisting from the behaviors and associations that could re-involve them in crime. In theory, support for the process of reentry should begin during incarceration and continue well into release, but high rates of incarceration and lack of support for prison programing makes this unlikely (Petersilia, 2003). With so little attention often given to the process of reentry, it is unsurprisingly that recidivism rates are high.

Researchers have stressed the importance of understanding crime and recidivism as a dynamic interaction between the individual and their environment across the lifetime (Sampson & Laub, 2005; Visher & Travis, 2003). Visher and Travis (2003) suggest "individual transitions from prison to community are […] best understood in a longitudinal framework, taking into account an individual's circumstances before incarceration, experiences during incarceration, and the period after release—both the immediate experience and long-term situational circumstances" (p. 89). Even if a former prisoner has the motivation and cognitions needed for desistence, they also need what Giordano, Cernkovich, and Rudolph (2002) call "hooks for change"—environmental catalysts, which make possible the life changes that they desire to undertake.

Despite this complex understanding of crime, policy-makers and practitioners tend to see recidivism as based in individual-level characteristics (Kubrin & Stewart, 2006), and researchers continue to focus on these variables as well (Mears, Wang, Hay, & Bales, 2008). The majority of recidivism risk-reduction research focuses on changing the individual, including the popular Risk, Needs, Responsivity (RNR) model (Andrews & Bonta, 2010), which focuses on self-control, criminal thinking and attitudes, parenting skills, and adopting prosocial leisure pursuits.

Although cognitive change, especially narratives of redemption, are important for desistence (see Maunra, 2001), individual-level research often neglects the many environmental risks for recidivism that prisoners face during and after incarceration. Prisoners typically return to the same poor communities and circumstances that they experienced prior to their incarceration (Luther, Reichert, Holloway, Roth & Aalsma, 2011; Petersilia, 2001), and the incarceration itself then leaves them with maladaptive behaviors, stigma, and increased separation from family, friends, and community. Most people released from prison want to succeed (Petersilia, 2001; 2003) and want access to services that would help them to succeed (Lattimore, Steffey, & Visher, 2010). Unfortunately, the realities of the current criminal justice system and the separation of criminals from society may make reintegrating

into the community, meeting physical and psychological needs, desisting from crime, and creating a prosocial identity difficult, which puts the individual at high risk for recidivism.

Goffman (1961) defines the “proactive status” of a former total institution inmate as their social position after institutionalization is over. For inmates leaving prison their status is decidedly lower. Schnittker (2014) demonstrated that after incarceration former prisoners see themselves as holding a low status within society. Participants were shown two ten-rung ladders that represented social standing in the U.S. and in the participants’ community. Participants were asked to place themselves on each of these social standing ladders. On both ladders, formerly incarcerated participants placed themselves an entire rung lower than did participants who had not been incarcerated. This stigmatization of individuals in the criminal justice system is perceived to negatively impact perception from potential employers, law enforcement, and communities (Schneider & McKim, 2003).

Those convicted of a crime also face extensive barriers to employment and economic wellbeing. People with criminal backgrounds are among the groups thought to be least likely to obtain and maintain employment (Graffam, Shinkfield, & Hardcastle, 2008). A survey of 3000 employers hiring for positions that did not require a college degree found that 60% would “probably not” or “definitely not” hire someone with a criminal record (Holzer, Raphael, & Stoll, 2002). A criminal record may cause employers to see the potential hire is untrustworthy (Holzer et al., 2002; Petersilia, 2003). Therefore, employers fear liability if their new employee has a criminal record (Petersilia, 2003; Western & Pettit, 2010). Employment rejection is reported to be one of the two most common forms of rejection experienced by formerly incarcerated people, alone with housing rejection (LeBel, 2012). Even within their own communities, people are reluctant to hire former prisoners (Clear, Rose, & Ryder, 2001). Former prisoners are also less likely to be seen as having the skills needed for employment (Graffam et al., 2008; Holzer et al., 2002). Skills may have also been lost while the individual was incarcerated and outside of the labor force (Western & Pettit, 2010). With these many barriers, it is unsurprising that some measures suggest that as many as 80% of former

prisoners are unemployed one year after release (Petersilia, 2003). A review of research on labor markets and crime suggests that unemployment is associated with more arrests and the commission of more crime (Bushway & Reuter, 2002), while employment is generally believed by both prisoners and experts to be essential for successful reentry (Petersilia, 2003).

Besides facing stigmatization in employment, criminals face a number of civic barriers. Felons face restrictions on access to public housing, financial aid, and public assistance (Petersilia, 2003; Uggen, Manza, & Thompson, 2006). Laws like the Adoption and Safe Families Act may result in the loss of parental rights while incarcerated (Petersilia, 2003). They may also lose their ability to participate in the democratic process, through bans on voting, jury service, and holding public office (Uggen et al., 2006). Sex offenders are also required to register with their state upon release (Petersilia, 2003). These "civic disabilities," as framed by Petersilia (2003), vary based on the state (Uggen et al., 2006). This means that reintegrating into society may pose more or less of a challenge for people in different areas of the country.

The disabilities and barriers faced by convicted criminals qualify them as a "distinctive status group" which has similar experiences due to shared dishonor (Uggen et al., 2006). Those leaving prison typically have little human, financial, and social capital before incarceration (Wakefield & Uggen, 2010), and incarceration serves to "deepen disadvantage" (Western & Pettit, 2010) through its impact on various parts the lives of formerly incarcerated people, including employment, health, education, politics, and civics (Wakefield & Uggen, 2010). Once in this category, it becomes difficult to escape and prosper; in the 20 years between 1986 and 2006 approximately one-fourth of formerly incarcerated men in the bottom quintile of earnings achieved upward mobility, compared with two-thirds of non-incarcerated men in the same earnings category (Western & Pettit, 2010). The many barriers to successful reentry put formerly incarcerated individuals at a significant disadvantage compared to other similar individuals.

The Role of Social Ties Post-Incarceration

Many theories of crime, including labeling, social support, and social control theories focus on how social ties can help to overcome these barriers and reduce future offending (Bales & Mears, 2008). The role of social ties in reducing offending is sometimes broadly referred to as the sociogenic theory of crime and is often encapsulated in the idea that all that is needed to desist from crime is "a steady job and the love of a good woman" (Maruna, 2001). Although this aphorism is perhaps oversimplified, social ties can serve to transform identity, to provide support, and to refrain from antisocial behaviors (Berg & Huebner, 2011).

Labeling theory (Lemert, 1967) suggests that the stigma associated with labels like "felon" or "ex-con" can affect an individual's future involvement in crime as a result of an internalization of the deviant label. This stigma may be less within the individual's own community than it is within the broader society. Western and Pettit (2010) suggest, "for poorly educated young men in high-incarceration communities, a prison record now carries little stigma" (p. 17). Other researchers suggest stigma is less likely in an individual's community, where community members are more familiar with the individual and less likely to make prejudicial judgments based only on the individual's involvement in crime (Bursik, 1999). This is supported by Schneider and McKim's (2003) findings that 67% of West Texas probationers interviewed said that their probation status would not affect their family and friends' opinions of them. They also perceived greater stigma from people who are unlikely to know them personally, such as employers and law enforcement officers. If people close to the convicted criminal see them in a less stigmatized and more humanized way, these relationships may provide support and serve as important protective factors to buffer against recidivism risk.

Social support is theorized to prevent crime through meeting the expressive and instrumental needs of an individual (Colvin, Cullen, & Ven, 2002). Colvin et al. (2002) define expressive support as "the sharing and ventilation of emotions and the affirmation of one's and others' self-worth and dignity" (p. 24) and instrumental support as "material and financial

assistance and the giving of advice, guidance, and connections for positive social advancement in legitimate society" (p. 24).

Social support is closely related to the concept of social capital. Social capital consists of the benefits and advantages individuals receive through their connections to other people (Bourdieu,1986). These connections may have intrinsic value (Putnam, 2000), but also may provide access to other forms of capital, including economic and cultural capital (Bourdieu,1986). An individual could be considered to have high social capital based on their position in their social network, the characteristics of their social network, and the quality and quantity of the resources they are able to access (Lin, 2000). Researchers have found that social capital positively impacts individuals lives in many ways, including by helping individuals to better cope with trauma (Putnam, 2000) and to attain greater socioeconomic status (Lin, 2000).

Even weak relationships may provide avenues for support and social capital. In Latane and Darley's seminal work on the bystander effect (1970) they found that even casually speaking with someone before they were in distress lead a participant to more quickly offer assistance. From this we can surmise that even casual acquaintances may provide helpful social capital when a former prisoner needs help.

Social control can reduce crime through obligations and restraints one feels because of their connections with others (Laub & Sampson, 2001). Bahr, Harris, Fisher, and Armstrong (2010) explain,

> The development of bonds helps people change. As parolees associate with individuals involved in conventional activities, they are likely to develop bonds that constrain them when they are tempted to violate their parole. For example, associating with family members and peers who are law abiding may help constrain parolees who are tempted to participate in illegal behavior. As they think about becoming

> involved again in illegal activities, the prospects of losing associations with a partner or children or losing a job may constrain them. (p. 670)

On the other hand, when bonds to society and individuals are weak, individuals may be more likely to engage in crime (Sampson & Laub, 1993). Life course theory researchers say that the negative correlation between age and offending can be explained by the eventual creation of adult bonds such as marriage and employment (Laub & Sampson, 2001). Additionally, individuals who are bonded to others in a group are less likely to threaten the collective interest of the group (Office of Juvenile Justice and Delinquency Prevention, 1995). It is through their social bonds that former prisoners may begin to see themselves less as a member of a criminal outgroup and more as a member of their community and family. Bursik (1999) examined 368 Oklahoma City adults and found that the more participants were integrated into primary, intimate, networks and secondary, less intimate, networks, the more they believed network members would lose respect for them if they were involved in crime. This suggests that network structures matter for creating social control through mechanisms like respect.

Many researchers have drawn on these theories, empirically demonstrating how relationships can support reentry success. Listwan and colleagues found that social support after prison was associated with increased psychological wellbeing (Listwan, Colvin, Hanley, & Flannery, 2010) as well as decreased arrest rates (Listwan et al., 2013). Employment, another measure of social bond and obligation to the community, also predicted arrest (Listwan et al., 2013). An examination of parolees three years after release found that parole completion was associated with having more friends and less loneliness, and qualitative data suggests that parolees who were successful had less strained family relationships (Bahr et al., 2010). Support from family and friends also seemed to make it easier for the parolees to stay away from situations in which they would be tempted to use drugs (Bahr et al., 2010).

Additionally, for individuals on probation, having support from family, friends, or both predicted the length of time survived on probation (Hepburn & Griffin, 2004).

Family members are found to be the primary providers of instrumental and emotional support, often providing housing and financial support after release (Mallik-Kane & Visher, 2008). Western, Braga, Davis, and Sirois (2015) found that about two-thirds of his sample received support in the form of housing or money during their first week back in the community. Most of this support came from female relatives (not including romantic partners). More than two-thirds of Western et al.'s sample had contact with their family on the first day of their release. However, during the course of that first week recently released prisoners began to spend greater amounts of time alone. Those who were most socially isolated during that first week were less likely to be well-integrated into the community six months post-release. This was especially the case for older participants who spent more of their first week idle and detached from their family, and subsequently were less well integrated six months post-release (Western et al., 2015). However, for those with long histories of incarceration, as is that case with many older prisoners, relationships may be less important for reducing recidivism. Positive bonds with parents and partners are associated with a smaller reduction in recidivism for those with a history of more arrests, compared with those with a history of fewer arrests (Cobbina, Huebner, & Berg, 2012).

Harding et al. (2014) conducted an in-depth qualitative study, interviewing former prisoners over two to three years about their ability to "make ends meet." When individuals fluctuated between periods of stability and instability, the periods of stability were usually associated with family support. The individuals who were able to maintain stability, relied on family, but also had their own income, so their family was not over-taxed with responsibility. Those who not only maintained stability, but were able to improve their conditions, typically had family or a romantic partner with social and economic resources, whom they could rely on for long-term housing and financial support and who had social networks that could connect them with higher paying and stable jobs. Housing and financial support is especially

important for those individuals released directly into the community (opposed to first going to a halfway house), because family, friends, romantic partners, and homeless shelters are the only housing options.

A Vera Institute of Justice study (Nelson et al., 1999) looked at the process of reentry in greater depth, demonstrating the many ways that family and social connections can provide assistance throughout the processes reentry, helping former prisoners to rebuild their lives and avoid crime. Researchers followed individuals reentering the community from New York prisons and jails, interviewing them before, during, and after their release. Of the 66 interviewed at the time of their release, 50 reentered alone, with no one to meet them. Often this occurred in the middle of the night, when finding housing and other immediate necessities would be difficult to find. Forty-nine individuals remained in the study for the full month. Of these individuals, 40 were living with relatives or partners two days after release and most continued in this living situation throughout the end of the study. Of those whose pre-release plan was to go to a shelter, 38% absconded in the survey time period, compared with only 5% of those who did not go to a shelter. Family provided individuals with a number of supports and resources. They provided them with food, housing, and sometimes income or emotional support. Some also provided support for abstaining from substance use by accompanying them out of the house or to Narcotics Anonymous meetings. All those who found employment in the first two weeks out did so by utilizing existing social ties, either reconnecting with previous employers or through family and friends. Rough quantitative measures indicated that individuals with supportive families were more likely to find employment, less likely to be involved in criminal activity, and more likely to be successful a month after release (with success measured by securing employment, stable housing, new friends, and avoiding drug use and criminal activity).

The Vera Institute study demonstrates some of the ways that social ties are used by people leaving prison or jail who have very few other resources. Luther et al. (2011) found that when basic needs, like housing and employment, were not met, individuals were more

likely to engage in risky behavior. Social ties with friends and family can also protect former prisoners from experiencing rejection in finding housing or employment (LeBel, 2012). Some research has suggested that family support is beneficial specifically for its ability to connect individuals with jobs. One study found that although both family ties and employment negatively correlated with recidivism, when entered in the same model, family ties were no longer significant (Berg & Hueber, 2011). This suggests that family ties may benefit former prisoners through connecting them with employment opportunities or through motivating them to find employment. Those with residential stability after release are also less likely to experience recidivism (Makarios, Steiner, & Travis, 2012; Tillyer & Vose, 2011), and family can play an important role in maintaining this stability.

Even for those who are homeless, social ties can help create stability. Rowe and Wolch (1990) suggest that personal identity is in part shaped by a daily routine where people visit different locations in space (for example: home, work, day care, home). However, when individuals do not have routine path of visiting different locations, they may create their daily routines around other people. For example, a homeless individual may go out each day to find food, but instead of returning to a home base, return to a partner who is their home base. In this way, social ties may create a sense of stability for those without physical locations to which they can return.

But the impact of social ties is not always positive. Individuals who commit crime are often embedded in social networks and relationships that are unhealthy or related to their criminal behavior (Colvin et al., 2002). A meta-analytic study of predictors of recidivism found that socializing or identifying with others involved in crime was the largest factor predicting recidivism (Gendreau, Little, & Goggin 1996). Likely for this reason, support and connection with old friends seem to have a mixed impact on success. Bahr et al. (2010) found that those who succeeded said friends had been resources, and those who did not succeed said friends were why they had recidivated. In a study of “drug-involved” offenders Spohr, Suzuki, Marshall, Taxman, and Walters (2016) found that while quality of social support predicted

criminal risk, the quantity of social support did not. This may be because those with more social connections were also likely to be engaging in risky sexual behavior and substance use. Nelson et al. (1999) found that those who did reunite with old friends after release were divided on whether these friends provided helpful support, and those who did not return to old friends reported feeling lonely and isolated. This is not surprising, as many individuals who commit crime report that their drug use and criminal activity has led to the loss of all positive friendships, leaving them isolated (Graffam, Shinkfield, Lavelle, & McPherson, 2004).

Family support can also be similarly unhelpful if the relationships were poor before incarceration. Petersilia (2003) explains, “a solid marriage can give a prisoner emotional support upon release, an immediate place to live, motivation to succeed, and possibly financial assistance until he gets his feet on the ground. On the other hand, marriage can also produce dynamics that contributes to family violence, substance abuse, and economic pressure” (p. 41). La Vigne et al.’s (2005) research supports this idea, finding that contact during incarceration with intimate partners can have a positive or negative effect on post-release support based on the quality of the relationship before incarceration. Additionally, some families cannot help or do not want to help the person leaving the prison (Shapiro & Schwartz, 2001). However, most still hope for success for their recently incarcerated family member (Shapiro & Schwartz, 2001).

Although social ties do not always have a positively impact on those involved with crime, as a whole the literature suggests they do more good than harm. However, if the experience of incarceration distances prisoners physically and psychologically from their families and friends it may weaken the relationships needed for social support and social control and to combat internalized stigmatization. If these relationships are maintained during incarceration or rebuilt after incarceration, they could support reentry success, serving as a bridge to society and making it easier to reintegrate.

Chapter 2: Social Network Analysis

One way to examine the relationships between formerly incarcerated people and their communities is through social network analysis (SNA). SNA is a fast growing field; the number of articles published on the topic tripled in the first decade of the 21st century (Borgatti, Mehra, Brass, & Labianca, 2009). The phrase "social network analysis" refers not only to a method of analyses, but also to a tradition of learning about the world by focusing on the relationships between units (McGloin & Kirk, 2010). These units can be people, groups of people, organizations, or places, and they can be analyzed in a variety of ways based on the unit of analysis and the questions being posed. While some research attempts to describe a "total" network (for example, *all* Fortune 500 companies), research can also seek to examine "partial" networks (Scott, 2000). One type of partial network is an egocentric or personal network. These are the networks that surround one person—the "ego—and show the people with which they are connected—the "alters"—and the relationships between the alters. What constitutes an individual's personal network is defined by the researcher. For example, a researcher may be interested in all people an ego has spoken to this year or all the people they would turn to for help with a personal problem. This network can then be visually represented with "nodes" representing the alters and "edges" representing the relationships between alters. SNA allows researchers to examine both the attributes of individuals within the network as well as their connections and relations to others (Martino & Spoto, 2006). Egocentric network research often includes gathering information about attributes of the ego, attributes of their alters, their relationships with their alters, and the relationships between alters (Scott, 2000). Networks can be examined for overall structure (e.g., size, density, shape) or for the attributes of the alters and the relationships (e.g., proportion female, average closeness of relationships).

Social networks and social support can impact both physical and psychological wellbeing. Belonging to a community has been found to be negatively associated with depressed mood (Lin, Yes, & Ensel, 1999), while social connectedness predicts greater

happiness (Putnam, 2000). Researchers have also found that socially disconnected people are between two and five times as likely to die from a variety of causes when compared to matched individuals (Putnam, 2000). Social networks have a direct positive impact on wellbeing (Cohen & Wills, 1985), but can also increase wellbeing through reducing or buffering against stress (Cohen & Wills, 1985; Ferlander, 2007) and increasing feelings of self-efficacy (Ferlander, 2007). Thoits (2011) expanded on this idea, explaining that social support impacts health by providing self-esteem, belonging and companionship, role-based purpose and meaning, sense of control, perceived availability of support, social control, and social comparison.

Many researchers have spent time examining and debating what make "good" and beneficial networks. Typically, controlling for other differences, a larger network consisting of more individuals is better (Burt, 1992; Crow, 2004). Individuals with smaller networks are financially poorer, less healthy, and score worse in measures of overall wellbeing compared to those with larger networks (Crow, 2004). Networks can also differ in other ways. The related measures of density, components, and structural holes look at the relationships between alters. Density measures proportion of alters that connect with one another. In a dense network, alters are more likely to know each other. This is often seen in networks made up predominately of family members (Chua, Madej, & Wellman, 2011). Family is often seen as an important source of support (Wellman & Wortley, 1990), and dense networks have greater incentive to be cooperative and to behave prosocially (Coleman, 1988, 1990). Denser networks also provide more support, though the emotional support provided may be less satisfying (Hirsch, 1979). Additionally, individuals with a dense core network are more likely to receive support in both routine and non-routine situations (Hurlbert, Haines, & Beggs, 2000).

On the other hand, Burt's concept of structural holes (1992) suggests that less dense networks are beneficial for different reasons. When alters within a network are not connected, they are more likely to offer access to different information and resources. If connections exist

between alters they are more likely to produce redundant information. People with loosely knit networks also adjust better to new roles (Willmot, 1987). Burt (2005) suggests that both dense and less dense networks can be beneficial in different situations, and posits that the ideal network may include dense clusters connected by single individuals.

Related to density and structural holes, is the concept of components. A component is “a set of alters who are connected to one another directly or indirectly” (McCarty, 2002, para. 31). Individuals within a component can only communicate with others within the component (McCarty, 2002), suggesting that, not only is no new information flowing in, but also that all information could be known to everyone in the component. This could prove a boon or a curse, as all components members would know if the ego needed help, but all would also know if the ego did something wrong.

There is also ambiguity in the benefits of strong versus weak relationships in networks. In Granovetter’s seminal works (1973, 1983) he argues the importance of “weak ties,” showing that mere acquaintances form bridges to other networks, connecting the ego to jobs and other opportunities. He suggests that weak ties connect to people who are different from the ego, offering social mobility. However, this research also suggests that weak ties may not provide increased opportunities for individuals with low socioeconomic status (SES), as their weak ties may connect them to others with low SES (Granovetter, 1983). These individuals therefore continue to rely on strong ties to find employment. Wellman & Wortley (1990) also found that strong ties provide more kinds of support than weak ties. Together the contradictory findings about relationship strength and density suggest that what constitutes a “good network” for individuals with medium or high SES may not be good for individuals with low SES. Instead individuals with low SES may receive the benefits from strong ties (Granovetter, 1983; Lin, 2000) and may be more likely to rely on family (Lin, 2000).

Another consideration in defining a “good” network is whether it is more beneficial to have a network of individuals similar to the ego or different from the ego. In social network and social support research the tendency to for individuals to interact with people who are

similar to themselves is called homophily (Lin, 2000) or homophilia. Some researchers suggest that similar individuals may be more likely to provide each other with support (Ibarra, 1993). However, if a disadvantaged person is most likely connected to other disadvantaged individuals, these relationships may not provide them access to advantages or resources (Lin, 2000). Therefore, homophilia could keep individuals constrained in non-beneficial networks. Relationships with non-similar others are also are more likely to dissolve (McPherson et al., 2001), leaving disadvantaged individuals more likely to lose beneficial relationships.

Thoits (2011) distinguishes two different types of people that make up networks: "significant others" and "similar others." Significant others are those with whom an individual has an enduring intimate relationship; however, similar others are likely to be familiar with the stressful experiences that the individual is going through. Therefore, these types of individuals may provide support in different ways. For example, while significant others can offer sympathy and instrumental assistance, similar others have empathic understanding and can provide information and advice. Similar others can also serve as a model for coping (Thoits, 2011). This theory clarifies why homophilia could have both negative and positive outcomes.

In describing networks, it is also helpful to disentangle two important concepts: social network and social support. The phrase "social support" is often used to describe *both* the structure of a network and the support function of the network provides (Lin, Yes, & Ensel, 1999). However, in the rest of this paper the phrase "social support" will refer explicitly to function of network members (e.g., instrumental and emotional support), while "social network" will refer to the structure. It is important to realize that even if someone has a large social network, the social support provided by that network may be limited (Wellman & Wortley, 1989). Additionally, alters may only be able to provide an individual with certain types of support, as people tend to "specialize" in the type of support they provide (Wellman

& Wortley, 1989). However, both the quality and the quantity of resources are important to determining social capital (Lin, 2000).

Operationalizing social support also requires considering whether to measure perceived or actual support. Burt, Kilduff, and Tasselli (2013) describe an ever-present struggle in social network analysis research to determine which of these measures is more relevant. Some researchers say that perceived support does not predict actual support (Gottlieb, 1985). However, Green, Hoover, Wagner, Ryan, and Ssegujja (2014) found that egos are fairly accurate when reporting on their relationships with alters. Additionally, individuals are also bad at remembering their interactions and behavior, so measuring "actual" support also has the potential for inaccuracy (Borgatti, Everett, & Johnson, 2013). The perception of support can also be more important than actual ability to provide support, as an individual who is not perceived to provide support may not be sought when support is needed. A compromise is to ask individuals whom they would turn to for certain types of support. This may be especially relevant for very recently released individuals, who may not have had much time to ask for support since their release.

Crime and Social Network Analysis

Some of the earliest social network research was conducted by Jacob Moreno (1932) to explore whether social groups could be formed within a prison to produce desired behavior. However, since then, the social network research on prison and prisoners has been limited, and the majority of research on social networks and crime has focused in three other areas: the impact of networks on delinquency and crime, the influence of neighborhood community on crime, and the understanding of criminal networks and organized crime (Carrington, 2011). The literature on networks impacting crime and delinquency focuses primarily on adolescents and finds strong evidence that adolescent delinquency is associated with having delinquent peers (e.g., Brendgen, Vitaro, & Bukowski, 2000; Haynie 2001; Lonardo, Giordano, Longmore, & Manning, 2009; Weerman & Smeenk, 2005). Very little of this research focuses on networks that may end delinquency, although Brendgen et al.'s

(2000) findings suggest that when networks experience a reduction in delinquent peers, the ego is less likely to engage in delinquent behavior. The research on the influence of the neighborhood community on crime is closely related to social disorganization and social control theories (e.g., Bursik, 1999; Sampson & Groves, 1989; Sampson, Raudenbush, & Earls, 1997). Research on criminal networks or organized crime is relatively new and it often exploratory and descriptive (Carrington, 2011). Neither research on neighborhood community and crime nor on criminal networks typically use egocentric methods, instead examining whole communities (Carrington, 2011).

Some researchers study social support or social integration of prisoners, drawing on concepts from social network analysis and sometimes incorporating pieces of the methodology, but not utilizing its full capabilities (e.g., Cobbina et al., 2012; Duwe & Clark, 2013; Mallik-Kane & Visher, 2008; Spohr, Suzuki, Marshall, Taxman, & Walters, 2016; Western et al., 2015; Winetsky, Almukhamedov, Pulatov, Vezhnina, Dooronbekova, & Zhussupov, 2013). And in 1974, famous social network researchers Killworth and Bernard mapped the network of one cottage of female prisoners and staff at a correctional facility. However, this project's main goal was to provide information about a new methodological technique and did not provide substantial insight into prisoner behavior outside a single living unit at a single prison. Studies by Reid and Maxson (Reid, 2015; Reid & Maxson, 2016) have looked at egocentric friendship networks in the California Department of Corrections and Rehabilitation, but only in the Division of Juvenile Justice.

Very few researchers map the personal networks of adults involved with crime using traditional social network analysis methodologies. Kreager and colleagues (2016) recently suggested "returning inmate society to the forefront of criminological inquiry" (p. 1), and they suggest network science as means for doing this. I would add that we should not only study inmate networks within prisons, but also study their networks outside of prison. The few studies that have looked at criminally involved adults and their personal networks demonstrate the potential for this area of research. Rivlin, Hawton, Marzano, and Fazel

(2013) compared suicidal inmates with non-suicidal inmates, finding that suicidal inmates were more likely to have no, or few, close friends outside of prison. Best, Hernando, Gossop, Siwell, and Strang (2003) examined the networks of 128 opiate users in inpatient treatment and found that drug users who had spent more time with other drug users over the previous month were more likely to be involved with crime more recently. Skeem, Eno Louden, Manchak, Vidal, and Haddad (2008) examined the personal networks of probationers with co-occurring mental health and substance abuse disorders. They found that the networks of these individuals were typically small (mode = 4), consisted mainly of family and friends, but also consisted of a surprisingly large proportion of treatment providers and probation officers (22% of network members). The first person to whom these probationers turned for support was usually a family member (45%) or a friend (34%); however, many also turned to probation officers or treatment professionals (10%). The best predictors of probation and treatment rule compliance were the size and composition of their networks. For example, participants were less likely to comply with treatment rules when their network was small and contained many drinkers and few people who provided material help, and when the relationship quality with their core network members was poor. Recent probation violations were more likely when networks contained a large proportion of friends and individuals who drank and used drugs. In a fourth study, Bond, Thompson, and Malloy (2005) compared the networks of young and old prisoners. Their findings suggested that older prisoners have fewer network members as they age, but that they remain very emotionally close with these members. Finally, Resig, Holtfreter, and Morash (2002) looked at the networks of a sample of 402 women under the supervision of probation, under the supervision of parole after their release from prison, and under no supervision after their released from prison. They found that these women had networks consisting of between zero and 20 alters. Their networks were comprised of approximately 35% relatives and 29% friends. Women who were more educated and had higher income had larger networks and received more overall support from their network.

These five studies reflect a pattern throughout SNA. Much of social network research is descriptive, and analyses typically use networks as independent variables, rather than dependent variables (House, 1987). Some work, like that of Bond et al. (2005) and Resig et al. (2002), may examine how demographic characteristics predict networks, but research that looks at how different environments and contexts impact networks is uncommon. This is surprising, as social network theory is based in large part on the idea that behavior and personality is dependent on the social context surrounding the individual (Burt et al., 2013; Clifton & Kuper, 2011). A logical extension would be to ask how and why this social context forms. The small amount of research that has been done suggests that environments play an important role in shaping our social network (Mitchell & Trickett, 1980), yet little has been done to look at how specific environments shape these networks.

Chapter 3: Present Study

This dissertation focuses on the way that certain powerful environments—correctional facilities—shape social networks. Research described in Chapter 1 demonstrated that social ties are essential for successful reentry; therefore, the research seeks to better understand how these social ties could be impacted by incarceration histories. To examine the impact of incarceration in prison, I compared the social networks of individuals released from prison to those of individuals released from jail. Although jails also physically and psychologically separate individuals from society, they typically keep an individual closer to home and separate them for shorter periods of time. This research utilized egocentric SNA to determine if the social networks of men incarcerated in prison differ from those of men incarcerated in jail and if these networks differentially predict support and wellbeing. I also sought to determine whether physical and psychological separation explain the relationship between correctional setting (jail vs. prison) and social networks. Hypotheses were as follows and are based in the literature reviewed in Chapters 1 and 2.

> Hypothesis 1: Incarceration setting predicts network attributes. Specifically, individuals returning from prison have networks that are "weaker" than individuals returning from jail. I expected their networks to be "weaker" in the following ways. Below each sub-hypothesis are my reasons for considering the following type of network as "weaker."
>
> > Hypothesis 1a: Individuals returning from prison have fewer people in their network than individuals returning from jail.

Controlling for other differences, a larger network is considered more beneficial (Burt, 1992; Crow, 2004).

> > Hypothesis 1b: Individuals returning from prison have a smaller proportion of family members in their network compared with individuals returning from jail.

Family is an important source of support (Wellman & Wortley, 1990), and family ties may be more important for low SES individuals (Lin, 2000). (The sample of individuals returning from prison and jail are expected to be low SES.)

> Hypothesis 1c: Individuals returning from prison have weaker ties with network members compared with individuals returning from jail.

Strong ties may provide more kinds of support than weak ties (Wellman & Wortley, 1990). Individuals with low SES may also receive more benefit from strong ties than weak ties (Granovetter, 1983; Lin, 2000).

> Hypothesis 1d: Individuals returning from prison have fewer people with whom they were in contact during their incarceration when compared with individuals returning from jail.

Men who are visited during incarceration reduce their chance of recidivism (Bales & Mears, 2008). Contact could also be expected to help maintain the strong ties needed to reduce recidivism.

> Hypothesis 1e: Individuals returning from prison have fewer groups or "components" of network members compared with individuals returning from jail.

Having multiple groups of individuals to turn to would offer more sources of information and resources opposed to the "redundant" relationships described by Burt (1992). Also, if a relationship with one network member or group failed, it will be less likely to harm relationships with other network members. It is also easier for individuals to adjust to new roles when their networks are not tightly knit (Willmot, 1987).

> Hypothesis 1f: Individuals returning from prison have a larger proportion of network members who have been incarcerated compared with individuals returning from jail.

Associating with other individuals involved in crime is a strong predictor of recidivism (Gendreau et al., 1996).

Hypothesis 1g: Individuals returning from prison have more “components” that include formerly incarcerated network members compared with individuals returning from jail.

If an individual tries to stop associating with a group involved with crime, they will have other groups to which they can turn.

Hypotheses 2: The impact of correctional setting on network attributes is explained by greater physical separation and greater psychological separation experienced by those leaving prison when compared with those leaving jail.

Hypotheses 3: Incarceration setting predicts social support. Specifically, individuals returning from prison have less support available to them than individuals returning from jail. I expect correctional setting impacts individual types of support in the following ways:

Hypothesis 3a: Individuals returning from prison have less emotional support available to them when compared with individuals returning from jail.

Hypothesis 3b: Individuals returning from prison have less instrumental support available to them when compared with individuals returning from jail.

Hypothesis 3c: Individuals returning from prison will have less overall support available to them when compared with individuals returning from jail.

Hypotheses 4: The impact of incarceration setting on social support is explained by “weaker” or “deficient” networks (as defined in hypothesis 1a-1g).

Hypotheses 5: Incarceration setting predicts wellbeing. Specifically, individuals returning from prison are less well than individuals returning from jail.

Hypotheses 6: The impact of incarceration setting on wellbeing is explained by “weaker” or “deficient” networks (as defined in hypothesis 1a-1g).

Although these hypotheses were analyzed separately due to sample size limitations, a combined model of these hypotheses can be seen in Figure 1.

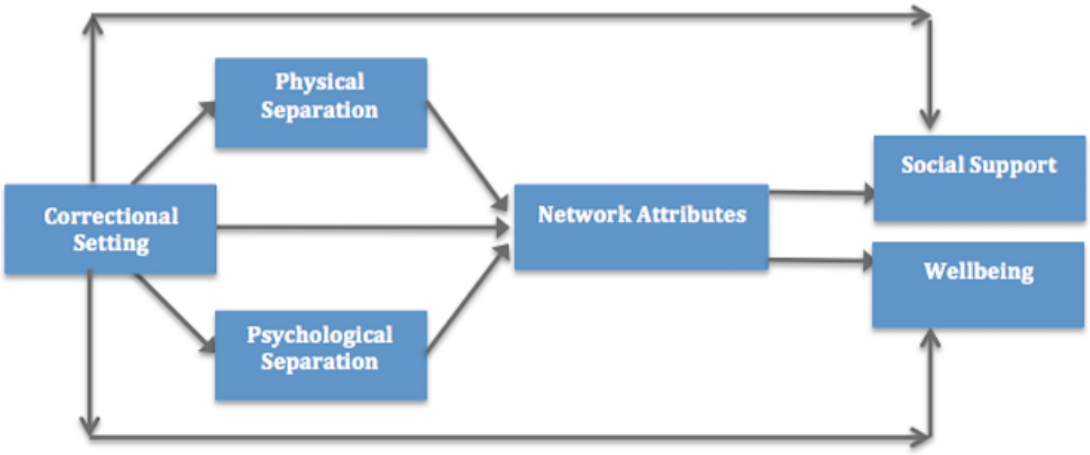

Figure 1. The proposed combined model of the impact of incarceration setting on social support and wellbeing.

If these hypotheses were not substantiated, I also planned to test a set of secondary hypotheses to determine whether other measures of correctional history predict network attributes and subsequently social support and wellbeing. These other measures include the distance and duration of participants' most recent incarceration, scale measurements of their past incarcerations, and scale measurements of lifetime incarceration. In additional to these primary and secondary quantitative hypotheses, I will also conduct a qualitative thematic analysis to contextualize and elaborate upon the quantitative findings.

Sample

Participants in this study were men recently released from prison or jail. Participant recruitment began at the end of July 2015 and ended at the beginning of June 2016. Originally participants were recruited through the Santa Cruz County Probation Department, which processes the reentry of clients who were released from jail and from prison. Probation staff were instructed to inform all clients who met the participation criteria about the opportunity for participation. The original criteria required that participants be male, incarcerated for at least six months during their most recent incarceration, released in the

past two weeks, and English-speaking. Probation staff were asked to speak to eligible participants and, if they were interested, to fill out a referral form with the client.

However, the small number of referrals in the first two months of the study made it clear that these criteria were too strict and that not all Probation Department clients were being informed about the study. Subsequently, criteria were expanded to include participants who were released in the last 2.5 months and participants who were incarcerated for at least 2.5 months. I also began to use new methods to recruit participants. Flyers were distributed and/or announcements were made at the following locations: Friends Outside, Sí Se Puede, RISE, United Way's Speaker's Bureau, the Santa Cruz County Mail Jail, Santa Cruz County Rountree Jail, Peace United Prison Ministry, and ALCANCE. Word of mouth also led to the recruitment of some participants.

Some participants are "AB109ers", who were affected by California's AB109 legislation, also known as the "California Prison Alignment." This legislation affects "non-serious, non-violent or non-sex offenses" (California Department of Corrections and Rehabilitation, 2016), although AB109ers may have previously been convicted of and/or served time for serious, violent, or sexual offenses. As a result of AB109, some former prisoners are under the supervision of county probation rather than state parole after release and some individuals who would otherwise be sent to state prison are sent to county jail. This meant that both participants returning from prison and jail could be recruited from Probation. However, it is also noteworthy that in some counties, including Santa Cruz County, this group receives additional funding for services for individuals affected by this legislation.

Table 1 shows the proportion of participants returning from prison or jail, based on how they were recruited (through Probation or by other means). Approximately half of the participants were returning from jail (48.5%) and half were returning from prison (51.5%). Although Probation mainly works with clients released from jail, most of the Probation referrals were released from prison (76.9%). This was likely due to the dedication of the probation officer supervising probationers returning from prison and because all the men

returning from prison had served more than 2.5 months. On the other hand, the majority (82.8%) of participants recruited from other sources were released from jail. Table 2 indicates which of these individuals were affected by AB109, California prison realignment. About two-thirds (69.1%) of the participants were classified as AB109. Nearly all (97.1%) of the participants returning from prison were classified as AB109, and 39.4% of those returning from jail were classified as AB109. All of Probation clients released from prison are on Post-Release Community Supervision (PRCS), a designation created by AB109.

Table 1. Percentage of Participants Returning from Prison and Jail by Recruitment Method

	Probation Recruitment		Non-Probation Recruitment		Total	
	%	*n*	%	*n*	%	*n*
Jail	23.1	9	82.8	24	48.5	33
Prison	76.9	30	17.2	5	51.5	35
Total	100.0	39	100.0	29	100.0	68

Table 2. Percentage of Participants Classified as AB109 by Recruitment Method and Correctional Setting

	Probation Recruitment						Non-Probation Recruitment						Total					
	Jail		Prison		Total		Jail		Prison		Total		Jail		Prison		Total	
AB109	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Yes	44.4	4	100.0	30	87.2	34	37.5	9	80.0	4	44.8	13	39.4	13	97.1	34	69.1	47
No	44.4	4	0.0	0	10.3	4	54.2	13	20.0	1	48.3	14	51.5	17	2.9	1	26.5	18
Unknown	11.1	1	0.0	0	2.6	1	8.3	2	0.0	0	6.9	2	9.1	3	0.0	0	4.4	3
Total	100.0	9	100.0	30	100.0	39	100.0	24	100.0	5	100.0	29	100.0	33	100.0	35	100.0	68

One participant's data were excluded because he indicated that his social network data were not accurate and because he was interviewed 73 days after his release. The final sample included 68 formerly incarcerated men: 35 released from prison and 33 released from jail. Those released from jail had served an average of 9.11 months and a median of 6.00 months. Those released from prison had served an average of 26.64 months and a median of 21.10 months.[1] Individuals released from prison were incarcerated in an average of 2.86 prisons during this most recent incarceration. Those returning from prison were asked on a scale of one to five to indicate how far each prison they were incarcerated in was from where they had been living prior to the incarceration. [2] Those returning from jail were asked the same about the jail in which they were incarcerated. The scale allowed participants to estimate distance using the time it took to drive to the facility. Higher numbers indicate a farther distance. Those returning from jail had an average distance of their recent incarceration of 1.27, indicating on average they were incarcerated in the same county they had been living prior to the incarceration. Those returning from prison had a weighted average distance of their recent incarceration of 2.93 (see the Appendix for calculation), indicating they were generally incarcerated between one and three hours from where they had been living before the incarceration.

At the time of the interview, an average of 18.71 days had passed since a participant's release (including the day they were released and the day of their interview). Men released from jail were incarcerated an average of 7.00 times previously, and men

[1] In this paper I include two variables that show the length of the most recent incarceration. In Table 3 they are labeled "Total Time Incarcerated 1" and "Total Time Incarcerated 2." "Total Time Incarcerated 1" was calculated by adding the total amount of time the participant reported serving in jail and the total time they reported serving in prison. "Total Time Incarcerated 2" was calculated by adding the total time the participant reported serving in jail and the length of time they reported serving at each individual prison. For those returning from jail, these two numbers are the same. For those returning from prison, these numbers may be slightly different due to participant estimation errors. For most purposes in this paper I will use "Total Time Incarcerated 1." "Total Time Incarcerated 2" is used when calculating the weighted distance of a participant's most recent incarceration. In the current instance I am using "Total Time Incarcerated 1".

[2] 1 = Same city or county, 2 = Less than 1 hour drive, 3 = A 1-3 hour drive, 4 = A 3-5 hour drive, 5 = More than 5 hour drive.

released from prison were incarcerated an average of 8.60 times previously. The average total amount of time a man released from jail had been incarcerated over his lifetime was 59.20 months. The average total amount of time a man released from prison had been incarcerated over his lifetime was 102.40 months[3]. Table 3 gives a more extensive picture of participants' criminal justice history. Using these numbers and the participants age, it was calculated that the average participant returning from jail had been incarcerated for 13% of his lifetime, and the average participant returning from prison had been incarcerated for 21% of his lifetime.

The average participant was 39 years old, but ages ranged from 19 to 63. The average age of men returning from jail was 36, and the average age of men returning from prison was 42. Most (61.8%) participants identified as White/Caucasian, 17.6% identified as Latino/Hispanic, and the remaining participants identified as another ethnicity. The majority of participants were unemployed at the time of their interview (67.6%). More than half (60.3%) were single and had never married, and 20.6% were divorced. The remaining individuals were married, separated, living with a partner, or widowed.

[3] These totals include any incarceration that lasted longer than one week. If the participant had been incarcerated more than ten times, these totals include the participant's ten longest/most significant incarcerations.

Table 3. Descriptive Statistics of Participants' Criminal Justice History

	N	Mean	Median	SD	Skewness	Kurtosis	Minimum	Maximum
Jail								
Recent Incarceration								
Days Since Release	33	18.67	18.00	11.29	0.76	0.45	3.00	47.00
Number of Prisons	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Months Incarcerated in Jail	33	9.11	6.00	7.97	1.54	1.55	1.50	32.00
Months Incarcerated in Prison	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Months Incarcerated Total 1*	33	9.11	6.00	7.97	1.54	1.55	1.50	32.00
Months Incarcerated Total 2*	33	9.11	6.00	7.97	1.54	1.55	1.50	32.00
Distance*	33	1.27	1.00	0.63	2.18	3.49	1.00	3.00
Previous Convictions & Incarcerations								
Number of Convictions	33	9.64	7.00	9.73	1.94	4.59	0.00	45.00
Number of Incarcerations	33	7.00	4.00	7.77	1.86	3.16	0.00	30.00
Months Incarcerated in Jail	33	20.52	12.75	19.60	0.95	-0.01	0.00	67.00
Months Incarcerated in Prison	33	29.58	13.00	59.88	3.90	17.67	0.00	319.00
Months Incarcerated Total	33	50.09	43.00	66.15	2.73	9.73	0.00	331.75
Distance*	33	2.07	2	1.43	0.36	-0.90	0.00	4.61
Lifetime								
Months Incarcerated Total	33	59.20	48.25	68.44	2.40	7.73	3.00	337.75
Percent of Life Incarcerated	33	0.13	0.10	0.12	1.81	4.94	0.01	0.60
Distance*	33	2.10	1.94	1.19	0.82	-0.56	1.00	4.54

Note. *The calculations used to obtain these variables can be found in Appendix A.

Table 3. Descriptive Statistics of Participants' Criminal Justice History (Continued)

	N	Mean	Median	SD	Skewness	Kurtosis	Minimum	Maximum
Prison								
Recent Incarceration								
Days Since Release	35	18.74	15.00	11.40	0.60	-0.56	3.00	46.00
Number of Prisons	35	2.86	3.00	1.46	1.35	2.09	1.00	7.00
Months Incarcerated in Jail	35	6.07	5.00	5.71	1.55	3.21	0.10	26.00
Months Incarcerated in Prison	35	20.57	16.00	12.81	0.98	0.36	2.00	54.00
Months Incarcerated Total 1*	35	26.64	21.10	14.27	0.91	0.09	8.00	63.00
Months Incarcerated Total 2*	35	26.42	22.00	14.47	0.78	-0.18	7.10	63.00
Distance*	35	2.93	2.83	0.71	0.28	-0.04	1.50	4.77
Previous Convictions & Incarcerations								
Number of Convictions	34	11.47	6.00	16.93	3.39	14.01	0.00	90.00
Number of Incarcerations	35	8.60	5.00	10.77	2.23	5.74	0.00	50.00
Months Incarcerated in Jail	35	26.23	20.50	23.81	0.86	0.01	0.00	83.00
Months Incarcerated in Prison	35	49.53	20.00	70.18	1.86	2.73	0.00	263.50
Months Incarcerated Total	35	75.76	40.00	87.70	1.65	2.22	0.00	346.50
Distance*	35	2.52	3.00	1.53	-0.26	-0.99	0.00	5.00
Lifetime								
Months Incarcerated Total	35	102.40	66.50	92.25	1.67	2.62	15.00	392.50
Percent of Life Incarcerated	35	0.21	0.15	0.16	0.93	-0.08	0.02	0.63
Distance*	35	3.06	3.08	0.88	-0.32	-0.29	1.13	4.76

Note. *The calculations used to obtain these variables can be found in Appendix A.

Table 3. Descriptive Statistics of Participants' Criminal Justice History (Continued)

	N	Mean	Median	SD	Skewness	Kurtosis	Minimum	Maximum
Total								
Recent Incarceration								
Days Since Release	68	18.71	17.50	11.26	0.66	-0.17	3.00	47.00
Number of Prisons	35	2.86	3.00	1.46	1.35	2.09	1.00	7.00
Months Incarcerated in Jail	68	7.54	5.50	7.02	1.67	2.61	0.10	32.00
Months Incarcerated in Prison	68	10.59	4.00	13.80	1.34	1.15	0.00	54.00
Months Incarcerated Total 1*	68	18.13	14.00	14.55	1.14	0.86	1.50	63.00
Months Incarcerated Total 2*	68	18.02	14.00	14.58	1.10	0.64	1.50	63.00
Distance*	68	2.13	2.13	1.07	0.33	-1.13	1.00	4.77
Previous Convictions & Incarcerations								
Number of Convictions	67	10.57	6.00	13.79	3.46	16.46	0.00	90.00
Number of Incarcerations	68	7.82	4.50	9.40	2.22	5.85	0.00	50.00
Months Incarcerated in Jail	68	23.46	16.25	21.90	0.94	0.14	0.00	83.00
Months Incarcerated in Prison	68	39.85	16.75	65.67	2.55	6.72	0.00	319.00
Months Incarcerated Total	68	63.30	41.50	78.48	2.02	4.09	0.00	346.50
Distance*	68	2.30	2.35	1.49	0.04	-1.10	0.00	5.00
Lifetime								
Months Incarcerated Total	68	81.43	57.00	83.84	1.91	3.90	3.00	392.50
Percent of Life Incarcerated	68	0.17	0.12	0.15	1.26	1.16	0.01	0.63
Distance*	68	2.59	2.70	1.15	0.04	-1.16	1.00	4.76

Note. *The calculations used to obtain these variables can be found in Appendix A.

I also asked participants to describe the most serious crime conviction leading to their most recent incarceration. Based on these responses, I coded their answers using the Uniform Crime Reporting Summary Reporting System (Federal Bureau of Investigation, 2004). This system allows classification of crimes and ranks them in order of seriousness. The classification rating ranges from one to 29, with a lower number indicating a more serious crime. The average seriousness of crimes committed by the participants in this sample was 13.65. Although this is not a perfect measure of seriousness of crime, it provides a rough estimate of which crimes are considered most serious by the criminal justice system. If an individual reported that they had been convicted of more than one crime, I classified them based on the most serious crime reported. Three participants described their crimes in ways that were too vague to allow for classification (e.g. “alcoholism,” “gangs”). Table 4 shows the proportion of responses that were coded into each of these categories.

Table 4. Classification of Convictions Using the Uniform Crime Reporting Summary Reporting System

Classification		N	%
3	Robbery	4	5.9
4	Aggravated Assault	5	7.4
5	Burglary	7	10.3
7	Motor Vehicle Theft	4	5.9
9	Other Assaults	4	5.9
10	Forgery / Counterfeiting	1	1.5
13	Stolen Property (buying, receiving, possessing)	4	5.9
14	Vandalism	3	4.4
15	Weapons (carrying, possessing, etc.)	5	7.4
18	Drug Abuse Violations	13	19.1
20	Offenses Against the Family and Children	2	2.9
21	Driving Under the Influence	7	10.3
26	All other offenses	6	8.8
	Unable to Classify	3	4.4

Note: A lower classification score indicates a more serious crime.

Only 7.4% of participants did not have a high school diploma or equivalency, while 41.2% had a high school diploma or equivalency, and 36.8% had completed some college. The remaining individuals had completed Associate, Bachelor's, or graduate/professional degrees. When asked about their parents' education, 19.1% of participants indicated that their mothers and fathers did not have a high school diploma or equivalency, while 35.3% indicated that their mothers and 39.7% indicated that their fathers had a high school degree or equivalency. Participants were unsure of their mothers' and fathers' highest level of education in 8.8% and 11.8% of cases respectively. The remaining participants reported that their parents had attended at least some college. Additional information about participant demographics, including breakdowns based on whether the participant was returning from prison or jail, can be found in Table 5.

Table 5. Participant Demographics

		Jail n = 33	Prison n = 35	Total n = 68
Race/Ethnicity				
	White/Caucasian	75.8	48.6	61.8
	Latino/Hispanic	9.1	25.7	17.6
	Black/African American	3.0	8.6	5.9
	Asian/Asian American	0.0	0.0	0.0
	Pacific Islander	0.0	0.0	0.0
	American Indian/Native American	3.0	2.9	2.9
	Middle Eastern/Arab-American	0.0	0.0	0.0
	Mixed race/bi-racial	3.0	8.6	5.9
	Other	6.1	5.7	5.9
Employment Status				
	Employed part-time	12.1	5.7	8.8
	Employed full-time	3.0	14.3	8.8
	Self-employed	9.1	2.9	5.9
	Unemployed	72.7	62.9	67.6
	Unable to work	3.0	2.9	2.9
	A student	0.0	8.6	4.4
	Retired	0.0	0.0	0.0
	A homemaker	0.0	2.9	1.5
Marital Status				
	Single, never married	63.6	57.1	60.3
	Cohabitating/living with partner	9.1	2.9	5.9
	Married/domestic partnership	3.0	8.6	5.9
	Married, but separated	6.1	5.7	5.9
	Divorced	15.2	25.7	20.6
	Widowed	3.0	0.0	1.5
Highest Level of Education Completed				
	No high school diploma or equivalency	6.1	8.6	7.4
	High school diploma or equivalency	42.4	40.0	41.2
	Some college	39.4	34.3	36.8
	Associate degree	6.1	11.4	8.8
	Bachelor’s degree	6.1	0.0	2.9
	Graduate/professional degree	0.0	5.7	2.9
Mother's Highest Level of Education Completed				
	Don't know	3.0	14.3	8.8
	No high school diploma or equivalency	15.2	22.9	19.1
	High school diploma or equivalency	30.3	40.0	35.3
	Some college	33.3	11.4	22.1
	Associate degree	3.0	0.0	1.5
	Bachelor’s degree	12.1	11.4	11.8
	Graduate/professional degree	3.0	0.0	1.5
Father's Highest Level of Education Completed				
	Don't know	9.1	14.3	11.8
	No high school diploma or equivalency	18.2	20.0	19.1
	High school diploma or equivalency	42.4	37.1	39.7
	Some college	15.2	11.4	13.2
	Associate degree	0.0	0.0	0.0
	Bachelor’s degree	6.1	17.1	11.8
	Graduate/professional degree	9.1	0.0	4.4

Procedure

Each participant spoke with me on the phone before their interview. They were told about the nature of the study, that their responses would be confidential, that the researcher did not work for any law enforcement agency, and, if they were recruited from Probation, that this was not a requirement of their probation. Interested participants were offered two locations to be interviewed: the Resource Center for Non-Violence (76.5% of participants) and the Community Action Board, which administers the ALCANCE program (13.2% of participants). The locations were strategically located in two different parts of the county. Both organizations are non-profit and have missions that align with supporting individuals in desistence from crime. Additionally, some interviews were held at Sí Se Puede, a non-profit residential substance abuse treatment program, where some residents requested to be interviewed (10.3% of participants).

Each participant was interviewed by myself or by one of two carefully selected and trained research assistants. Interviews were held in a semi-private space. The interviewer explained the participant's rights and asked them to sign a consent form. Interviewers read the participant all questions and answer choices, and answers were immediately entered by the interviewer into a SNA analysis program called EgoWeb 2.0 on a laptop computer. The interview consisted of four parts. First participants were asked questions about their background and criminal justice history, then they completed the social network portion of the study, and then they answered scale questions about their thoughts and opinions. Finally, they were asked open-ended questions about support, support networks, and incarceration. I chose to have interviewers read the questions and answers to account for differences in reading abilities. For any question involving a scale, participants were also provided with a paper describing the answer choices as both numbers and words. At the end of the study, participants were asked if their qualitative responses could be anonymously quoted, for their feedback on the study, and given a chance to speak about anything else on their mind. Participants recruited through the probation department were also asked whether they

consented to researchers accessing their risk evaluation results and reconviction information through the Probation Department.

The interviews typically took between one and two hours to complete, and participants were encouraged to take breaks and were offered water and snacks. When the interview was done, participants were given a $30 stipend for their time, information about services available to formerly incarcerated individuals and their families, and information about what other researchers have found about support during reentry.

Materials

Demographic and criminal justice history measures. My research assistants and I collected basic demographic information about the participant's age, ethnicity, education, mother and father's education, employment status, and marital status. Participants were also asked about their criminal justice history including: their most serious recent conviction, recent correctional setting (jail or prison), AB109 status, duration of recent incarceration, number of correctional facilities incarcerated in during recent incarceration, estimated distance from home of each of these facilities, time in each of these facilities, time since release, number of previous convictions, number of previous incarcerations, duration of incarceration in jail and prison for each previous incarcerations, and estimated distance from home of each previous incarceration. At the end of the survey, anyone recruited through the probation department was asked permission to retain from the Probation department their probation identification number and the results of their CAIS, a risk evaluation that was implemented by the Probation Department. The retention of the probation identification number also will allow me to gather information in the future about their reentry success in order to analyses of social networks' impact on recidivism. The probation identification numbers are connected to their participant number through a password-protected key.

Social network measures. Egocentric social network data collection and analysis was used for this study. In each session we collected information to create an ego network for the participant. A "name generator" technique was used in which participants were

provided with criteria and asked to provide the names of alters (people) who met those criteria. Participants were asked to list up to 16 people they "know," where "know" is defined as people who "you recognize them and they recognize you by sight or by name," "you could reach them if you wanted to and needed to," "are not currently incarcerated," and "are still living." They were also prompted with a list of types of people whom they might want to list (e.g. siblings, parents, friends, neighbors, service providers). If they could not list 16, they were again prompted with this list, but assured that less than 16 was fine and that they could add more later if they wanted to. Those who had more than 16 people to list were told to pick the 16 people with whom they were closest.

Once this list of alters was created, participants were asked "name interpreter" questions to provide information about the characteristics of the alters and their relationships with the participant. These included questions about the alters' gender, age, ethnicity, employment status, relationship to participant, closeness with participant, whether they knew the alter prior to this incarceration, frequency of contact with the alter during this incarceration, whether the alter visited during this incarceration, whether they had been in contact with the alter since their release, whether the alter was ever incarcerated, and how far they currently lived from the alter. Additionally, participants were asked if they would go to each alter for emotional support and for instrumental/physical support. An alter was said to provide emotional support if, "you can count on them to care about you, no matter what is happening to you. That they accept you totally, including your good and bad points. That they are ready to accept you when you are upset, and are really concerned about your feelings and welfare." An alter was said to provide instrumental support if, "you can count on them to give you help and aid, to lend you money, to give you food, or to give you a place to stay without asking for anything in return." These definitions of support were adapted from questions asked by Johnson, Whitbeck, and Hoyt (2005). Finally, each alter was paired with every other alter to ask, "What is the likelihood that (alter 1) and (alter 2) talk to each other

when you are not around?." Each pairing could be rated "not at all likely," "somewhat likely," or "very likely" to talk to one another.

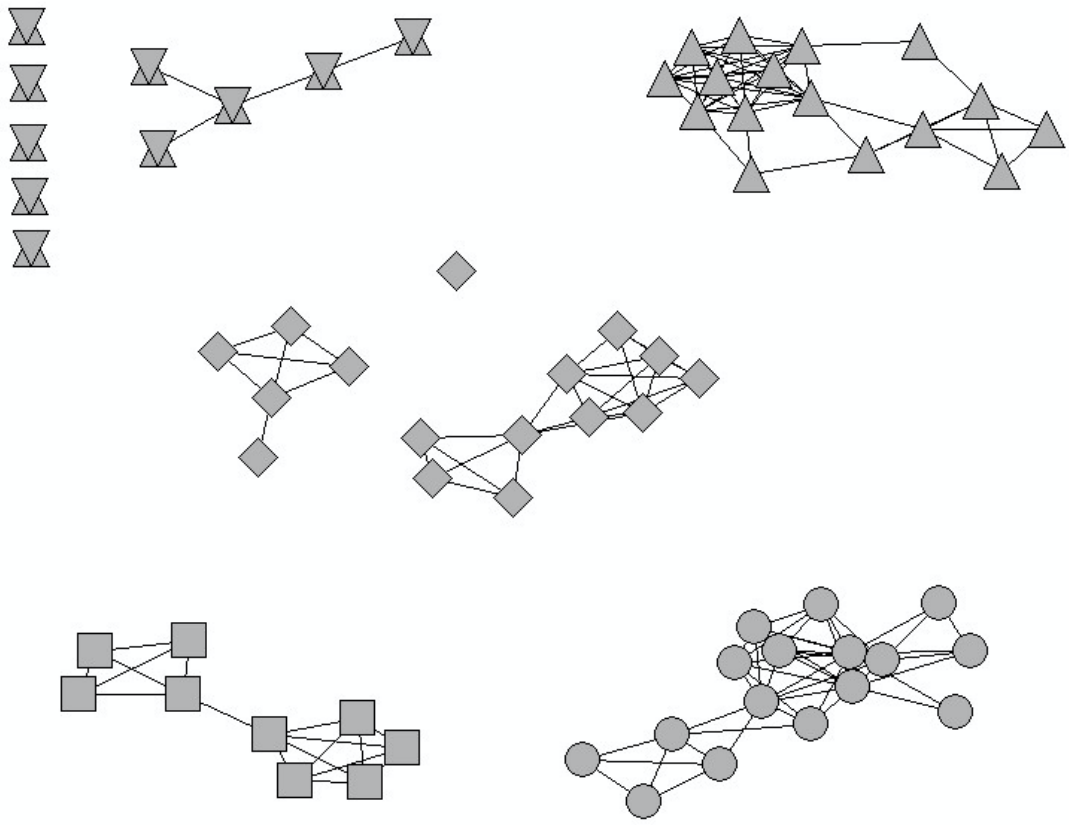

Figure 2. An example of five egocentric networks. The nodes are the alters listed by participants. The shape of the node indicates to which participants' network each alter belongs. Lines between nodes indicate that the alters are "somewhat likely" or "very likely" to speak with one another.

EgoWeb then automatically created a visualization of the participant's network. Examples of network visualizations can be found in Figure 2. The participant was shown their network, how to interpret it, and additional visualizations that highlighted who they said they were close with and who they said they would turn to for different types of support. They were

then asked if this was an accurate representation of their network. They were then asked to describe the components in their network, based on who was "very likely" to speak to each other when the participant was not around. The interviewer took notes about how the participant described each component.

Psychological separation. I used two scales to measure "psychological separation." The first was Tropp and Wright's Inclusion of Ingroup in Self Scale (2001). This measure shows the participant a series of two circles, overlapping in different amounts. The participant is asked to indicate which overlapping circles best represents how much they identify with and feel included in a specified group. In this study, the interviewer asked participants to indicate how much they identified with "people inside jail and prison" and "people outside jail and prison." A higher number indicated that the participant more strongly identified with and felt included in the group specified.

The second measure of psychological separation was a new scale created by Craig Haney and me to measure prisonization, or the psychological adjustments that prisoners make in order to cope with the stressors of incarceration. The questions and factor within this scale were conceptualized using Haney's (2003) description of the six ways in which prisoners are impacted by incarceration. The original scale consisted of 30 statements, with five statements to operationalize each of the six constructs described by Haney (2003). These constructs are "dependence on institutional structure," "hypervigilance and distrustfulness," "emotional over-control and alienation," "social withdrawal," "diminished self-worth," and "adoption of an exploitation worldview." Participants indicated the extent to which they agreed with each statement on a five-point Likert scale ranging from "strongly disagree" to "strongly agree," where a higher number indicated stronger agreement. More information about the development and reliability of this scale can be found in Chapter 4.

Social personality. A social personality scale was administered to potentially use in the future to determine whether any of the prisonization constructs were too similar to the Big Five personality measures of extroversion and agreeableness, and also to determine if any of

the network characteristics could alternatively be predicted by these two traits. The scale used to measure extroversion and agreeableness was adapted by Cohen, Doyle, Skoner, Rabin, and Gwaltney (1997) and Cohen and Lemay (2007) from Goldberg's Big Five Questionnaire (1992). Participants are asked how accurately a trait described them on a five-point Likert scale ranging from "not at all accurate" to "extremely accurate." There were 10 traits listed—five to measure agreeableness (unkind, rude, cold, pleasant, and harsh) and five to measure extroversion (talkative, bashful, shy, extroverted, and quiet). The reliability of both the agreeableness (α = 0.61) and extroversion (α = 0.78) scales was acceptable.

Wellbeing. The Cohen Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) was used as a measure of "wellbeing." The scale consists of 10 questions, and participants are asked how often they feel or think a certain way on a five-point Likert scale ranging from "never" to "very often." This scale was slightly altered so that participants were instructed to answer how often they have experienced these "since their release from jail or prison," rather than asking about their experience in the past month. Items included, "since your release, how often have you felt nervous and stressed?" and "since your release, how often have you felt confident about your ability to handle your personal problems?". The reliability of this scale was excellent (α = 0.92).

Qualitative questions. Participants were then asked open-ended questions to help contextualize their quantitative responses. The first question asked, "How do you feel your relationships with friends, family, and others have been affected by your time incarcerated?". The second question, which was developed with help from the Probation Department staff, asked them, "Have you encountered any obstacles or barriers that prevent you from reconnecting with family?". If they answered yes, the interviewer asked, "What are those barriers?"; if they answered no, the interviewer asked, "What has enabled you to reconnect with your family?". These questions were chosen because probation officers often try to connect their clients with family members to provide support.

However, after about half of the interviews were conducted, it became apparent that an additional qualitative question was necessary to understand who was missing from the egos' networks. Thus, each subsequent participant was asked, "Is there anyone who was in your network before your incarceration, who is no longer in your network?". This question was asked at the end of the interview, so we can be sure that participants who were asked this question did not answer earlier questions differently based on this question. Participants often made interesting and important statements in response to the open-ended questions posed at the end of the study that did not always directly address posed question. Therefore, notes were taken on these statements, whether or not they addressed the question at hand.

Chapter 4: Quantitative Results

Data Management

Data were exported from EgoWeb 2.0 and organized in Microsoft Excel. The resulting data were contained in two files: one that contained all data about the characteristics of the egos and their alters (each alter is a separate row of data) and one that contained the characteristics of the relationships between alters. EgoWeb automatically calculates some social network metrics when data are exported; however, additional steps needed to be taken to obtain other metrics.

To count the number of components and number of components that included formerly incarcerated alters, the two spreadsheets were imported into UCINET (Borgatti, Everett, & Freeman, 2002). This allowed the file to be saved in a format that can be imported into the social network data visualization software Netdraw (Borgatti, 2002). One network was displayed at a time, and the software's "components" function was used to color code the components and the formerly incarcerated alters, allowing me to count the number of relevant components. Components are defined as a cohesive subgroup where all alters connected through paths, and no alters are connected to alters outside of the component (Scott, 2000). This definition should encompass isolates, or alters who are not attached to any other alters; however, these individuals are not always counted as components. Therefore, two types of component variables were included–those including and excluding isolates. Alters were considered connected if a participant said they were "somewhat likely" or "very likely" to speak with each other. The ego was not included in the network when calculating social network metrics.

The spreadsheet including ego and alter characteristics was imported into SPSS, where the aggregate function was used to create summations, means, and proportions describing all alters associated with any one ego. Where relevant both the proportion and number of relevant individuals in the participants' networks were calculated. The resulting

data from both the Netdraw and SPSS aggregate analysess were inputted into one file in SPSS with the final data for each ego represented in a single row.

Preliminary Prisonization Scale Development

First SPSS was used to conduct an exploratory factor analysis examining the 30 newly developed prisonization items. This analysis aimed to determine whether these items mapped onto the six aspects of prisonization that Haney (2003) described: hypervigilance, emotional overcontrol, diminished self-worth, exploitive worldview, social withdrawal, and dependence on institutional structure. Sixty-six participants answered the prisonization questions, and the responses of three of these participants were excluded from the analysis because they appeared to not be paying attention or to be confused by the wording of the questions. The final sample of prisonization responses was 63. This sample is smaller than what is typically used for factor analysis and scale development (Costello & Osborne, 2005). Thus, although the following findings may provide preliminary information for the development of a prisonization scale, further analysis is needed with a larger sample.

Correlations between all prisonization items can be found in Table 6. Principal axis factoring was used to extract six factors from the 30 prisonization items, using a direct oblimin rotation. The data were determined to be suitable for a factor analysis as many of the correlations between items were above .3, the Kaiser-Meyer-Oklin value was .63, above the minimum recommended value of .6 (Kaiser, 1974), and Bartlett's Test of Sphericity (Bartlett, 1954) was significant, $p < .001$. Six factors were extracted explaining a total 47% of variance. Individually the factors explained 21%, 8%, 6%, 4%, 4%, and 3% of variance.

Preliminary examination of the pattern matrix (Table 7) indicated some support for Haney's (2003) six components of prisonization. Despite the small sample size, some of the expected items clustered together. Dependence on Institutional Structure and Exploitive Worldview both clearly emerge in this factor analysis. Hypervigilance and Emotional-Overcontrol appear to emerge as one factor, which could tentatively be called Emotional Guarding. Four items do not map onto any of the factors. Further discussion of how this

preliminary analysis can be used in future development of a prisonization scale can be found in Chapter 6.

To create a set of items that could be used in the current study, any item that did not correlate with any other item (<.3) or did not correlate with any other item within the factor it was intended to measure (<.3) was removed. For example, item 27 was removed because it intended to measure Diminished Self-Worth, but was not correlated with any of the other Diminished Self-Worth measures. This resulted in the removal of items 2, 4, 9, 12, 15, 16, 27, and 28. Principal axis factoring was then used to analyze the remaining items, extracting any factors with an eigenvalue greater than one. The resulting output indicated that six items had loadings greater than .3 on multiple factors (items 10, 17, 18, 20, 23, and 29). The analysis was rerun without these items. After reading the resulting output, item 7 was removed because it loaded onto two factors (>.3), item 8 was removed because it did not conceptually fit with factor on to which it loaded (which included items 3 and 21), item 22 was removed because it did not load on any factor (<.3), and item 30 was removed because it loaded onto a factor by itself.

Table 6. Correlations between All Prisonization Items

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1. It is necessary to always be suspicious of other people's motives. (H)	1.00																													
2. I let my guard down around people I'm close to. (EO)	.17	1.00																												
3. I don't mind being treated poorly. (DS)	.00	-.04	1.00																											
4. People who are weak are asking to be preyed on. (EW)	.15	.16	-.07	1.00																										
5. I avoid forming real relationships with other people. (SW)	.30	.06	.05	.12	1.00																									
6. I am worried about what I will do with too much freedom. (DI)	.18	-.20	.06	.12	.21	1.00																								
7. If I don't pay close attention others will exploit me. (H)	.42	.04	.02	.19	.39	.11	1.00																							
8. It's okay if people know I'm upset. (EO)	.20	.12	.59	.15	.12	.08	.12	1.00																						
9. I feel I am valuable to society. (DS)	.17	.07	-.13	.13	.28	.12	.20	.09	1.00																					
10. A real man is forceful and dominates. (EW)	.39	.07	-.09	.20	.01	.28	.26	-.02	.00	1.00																				
11. I want people to leave me alone. (SW)	.27	.17	-.06	.17	.54	.05	.49	.12	.15	-.09	1.00																			
12. I have gotten used to living with a lot of rules. (DI)	-.14	.05	-.25	-.10	-.12	.02	.04	-.11	.08	-.02	.01	1.00																		
13.I always stay watchful and alert to prevent people from hurting me. (H)	.54	.12	.02	.09	.31	.08	.59	.20	.20	.21	.46	.04	1.00																	
14. I always try to keep my emotions tightly under control. (EO)	.45	.15	.12	.15	.29	.16	.38	.31	.07	.21	.28	.09	.54	1.00																
15. I have the right to be treated fairly. (DS)	.10	.00	.02	.28	-.12	.06	-.11	.12	.07	.08	-.01	.00	-.24	-.13	1.00															
16. Kindness will not gain you respect. (EW)	.26	.25	.08	.10	.11	.19	-.06	.00	.08	.09	-.14	-.15	.02	.20	.02	1.00														
17. Being around people often makes me anxious. (SW)	.41	.01	.17	.28	.56	.24	.55	.14	.15	.12	.39	-.03	.40	.41	-.06	.27	1.00													
18. I'm comfortable making decisions entirely on my own. (DI)	.37	.07	.02	.14	.11	.42	.19	.17	.32	.26	.15	-.07	.11	-.02	.25	.34	.26	1.00												
19. You never know when someone may try to take advantage of you. (H)	.46	.12	.10	.08	.29	.28	.53	.18	.02	.20	.34	-.03	.65	.59	-.15	.27	.46	.15	1.00											
20. I am careful never to let others know what I'm feeling. (EO)	.48	.25	.03	.07	.54	.02	.53	.26	.22	.19	.34	-.05	.46	.59	-.08	.31	.54	.07	.45	1.00										
21. I deserve the bad things that have happened to me. (DS)	.26	-.12	.38	.07	.24	.29	.23	.37	.19	.03	.03	-.05	.06	.19	.16	.20	.27	.22	.22	.29	1.00									
22. It's important to take advantage of others before they do the same to you. (EW)	.26	.07	.17	.12	.14	.26	.25	.12	-.04	.42	.09	-.30	.14	.08	.05	.17	.35	.55	.07	.26	.07	1.00								
23. I feel most comfortable when I'm by myself. (SW)	.04	.12	.11	.00	.24	-.18	.28	.22	.04	-.01	.24	-.01	.23	.35	-.10	-.04	.33	-.23	.25	.42	.04	-.02	1.00							
24. I've gotten used to others taking care of things for me. (DI)	.09	-.13	.21	-.06	.05	.36	.14	.17	-.06	.25	.06	.17	.03	.02	-.01	.10	.23	.35	.12	-.03	.25	.21	-.13	1.00						
25. You can never let your guard down in social situations. (H)	.52	.17	-.04	.22	.40	.12	.56	.19	.25	.24	.50	.10	.64	.52	-.17	.07	.32	.18	.53	.58	.03	.10	.14	.07	1.00					
26. I've learned never to share too much about myself with others. (EO)	.60	.14	.04	.16	.39	.19	.64	.27	.25	.26	.49	.07	.58	.73	-.06	.16	.58	.22	.57	.67	.22	.30	.32	.07	.63	1.00				
27. I don't stand up for myself around powerful, respected people. (DS)	.14	-.14	-.09	.23	.24	.28	.16	-.03	.08	.13	-.03	.07	-.05	.09	.10	.25	.39	.29	.03	.08	.15	.16	-.02	.21	.00	.03	1.00			
28. Intimidating others isn't a way to get what I want or need. (EW)	.13	.23	-.01	.25	-.11	.17	.01	.08	-.04	.25	-.10	-.08	.02	.06	.16	.07	.09	.15	-.02	.01	-.07	.24	-.20	.13	-.06	.00	.16	1.00		
29. I often connect with people in deep and meaningful ways. (SW)	.28	-.04	-.14	.16	.15	-.02	.28	.03	.38	.33	.12	.08	.26	.23	.24	.06	.32	.19	.12	.34	-.01	.21	.23	-.02	.32	.44	.10	.20	1.00	
30. I'm looking forward to providing for myself, in my own way. (DI)	.13	.12	.00	.16	.06	-.14	-.05	.16	.41	.19	-.01	.14	-.03	-.09	.17	.11	-.02	.33	-.12	.00	.12	.12	-.11	.10	.05	.00	.16	.14	.29	1.00

Note. N = 63. P parentheses indicate which the prisonization component from Haney (YEAR) on which the item was based. H = Hypervigilance; EO = Emotional overcontrol; DS = Diminished self-worth; EW = Exploitive worldview; SW = Social withdrawal; DI = Dependence on institutional structure.

Table 7 Prisonization Factor Loadings for Exploratory Factor Analysis with Oblimin Rotation

	1	2	3	4	5	6
13. I always stay watchful and alert to prevent people from hurting me. (H)	.86					
25. You can never let your guard down in social situations. (H)	.83					
26. I've learned never to share too much about myself with others. (EO)	.77					
19. You never know when someone may try to take advantage of you. (H)	.72					
14. I always try to keep my emotions tightly under control. (EO)	.65					
7. If I don't pay close attention others will exploit me. (H)	.64					
1. It is necessary to always be suspicious of other people's motives. (H)	.57					
20. I am careful never to let others know what I'm feeling. (EO)	.52	-.30				-.37
11. I want people to leave me alone. (SW)	.51					
6. I am worried about what I will do with too much freedom. (DI)		.63				
24. I've gotten used to others taking care of things for me. (DI)		.53				
18. I'm comfortable making decisions entirely on my own. **r** (DI)		.52		.43		
23. I feel most comfortable when I'm by myself. (SW)		-.43				
2. I let my guard down around people I'm close to. **r** (EO)						
3. I don't mind being treated poorly. (DS)			.84			
8. It's okay if people know I'm upset. **r** (EO)			.75			
21. I deserve the bad things that have happened to me. (DS)			.47			
12. I have gotten used to living with a lot of rules. (DI)						
9. I feel I am valuable to society. **r** (DS)				.68		
30. I'm looking forward to providing for myself, in my own way. **r** (DI)				.66		
29. I often connect with people in deep and meaningful ways. **r** (SW)				.39		
15. I have the right to be treated fairly. **r** (DS)				.32		
4. People who are weak are asking to be preyed on. (EW)						
10. A real man is forceful and dominates. (EW)					-.56	
28. Intimidating others isn't a way to get what I want or need. **r** (EW)					-.50	
22. It's important to take advantage of others before they do the same to you. (EW)					-.44	
16. Kindness will not gain you respect. (EW)						
17. Being around people often makes me anxious. (SW)						-.74
27. I don't stand up for myself around powerful, respected people. (DS)						-.53
5. I avoid forming real relationships with other people. (SW)						-.51

Note. N = 63. Factor loadings < .3 are suppressed. **r** = reversed item. Parentheses indicate which the prisonization component from Haney (2003) on which the item was based. H = Hypervigilance; EO = Emotional overcontrol; DS = Diminished self-worth; EW = Exploitive worldview; SW = Social withdrawal; DI = Dependence on institutional structure.

The remaining data were determined to still be suitable for factor analysis; the Kaiser-Meyer-Oklin value was .82 and Bartlett's Test of Sphericity was significant, $p < .001$. A simple structure with three factors were extracted from the 12 remaining items and explained a total 49% of variance. One factor included items originally intended to measure Hypervigilance and Emotional Overcontrol, which, as stated earlier, together could be called Emotional Guarding. This factor explained 34% of variance. The second factor explained 9% of variance and included items thought to measure Diminished Self-worth and Dependence on Institutional Structure. Together these items suggest a factor that could measure that the participant believes that they are Deserving of Regulation. The third and final factor includes items that measure Social Withdrawal and explains 5% of variance. The resulting pattern matrix, as well as the items that make up this simple factor structure can be found in Table 8.

Once these three factors were extracted, the internal consistency for each factor as a subscale and the internal consistency of all 12 items when examined together were calculated. The internal consistencies of the overall Prisonization scale and the Emotional Guarding subscale were good (α = 0.82 and 0.89 respectively). The internal consistency of the Social Withdrawal subscale was acceptable (α = 0.70). The internal consistency of the Deserving of Regulation subscale is less reliable (α = 0.57), but acceptable for this preliminary analysis of prisonization. With a larger sample size we would expect to see more reliability in this factor.

Table 8. Factor Loadings for Exploratory Factor Analysis with Oblimin Rotation of Prisonization Simple Factor Structure

	Factor 1: Emotional Guarding	Factor 2: Deserving of Regulation	Factor 3: Social Withdrawal
14. I always try to keep my emotions tightly under control. (EO)	.82		
26. I've learned never to share too much about myself with others. (EO)	.78		
13. I always stay watchful and alert to prevent people from hurting me. (H)	.76		
19. You never know when someone may try to take advantage of you. (H)	.74		
25. You can never let your guard down in social situations. (H)	.65		
1. It is necessary to always be suspicious of other people's motives. (H)	.64		
21. I deserve the bad things that have happened to me. (DS)		.68	
24. I've gotten used to others taking care of things for me. (DI)		.45	
6. I am worried about what I will do with too much freedom. (DI)		.44	
3. I don't mind being treated poorly. (DS)		.43	
11. I want people to leave me alone. (SW)			.81
5. I avoid forming real relationships with other people. (SW)			.61

Note. N = 63. Factor loadings < .3 are suppressed. Parentheses indicate which the prisonization component from Haney (2003) on which the item was based. H = Hypervigilance; EO = Emotional overcontrol; DS = Diminished self-worth; EW = Exploitive worldview; SW = Social withdrawal; DI = Dependence on institutional structure.

Composite scores were created for each of the subscales and the overall prisonization scale by calculating averages. A high average prisonization score indicates that the participant is more institutionalized and adapted to the prison environment. A high score on a subscale indicates that the participant has adapted to the prison environment in that specific way. Descriptive statistics for these scales and subscales can be found in Table 9, as

can correlations between the overall scale and subscales. The prisonization scale and subscales all appear to have relatively normal distributions, and skewness and kurtosis were within acceptable ranges.

Unsurprisingly, all of the prisonization subscales significantly correlated with the overall prisonization scale. The subscales were not significantly correlated with one another, except for the Emotional Guarding subscale and the Social Withdrawal subscale, which were moderately correlated, $r = .51$, $p < .001$. In further studies developing the prisonization scale, additional items can be added that may make these two concepts more distinct.

Overall, these analyses demonstrate some support for the components of prisonization as described by Haney (2003). However, for the current study we will use a three-factor model that includes subscales measuring Emotional Guarding, Deserving of Regulation, and Social Withdrawal, with an overall prisonization scale that includes the 12 items from these subscales.

Table 9. Descriptive Statistics and Correlations of Prisonization Scale and Subscales ($N = 63$)

	No. of Items	*M* (*SD*)	Skewness	Kurtosis	Cronbach's α	1	2	3	4
1. Prisonization Scale	12	2.84 (0.67)	-0.22	-0.33	.82	1.00	.90*	.57*	.64*
2. Emotional Guarding Subscale	6	3.28 (0.93)	-0.28	-0.67	.89	.90*	1.00	.21	.51*
3. Deserving of Regulation Subscale	4	2.31 (0.79)	0.71	0.90	.57	.57*	.21	1.00	.14
4. Social Withdrawal Subscale	2	2.57 (0.92)	0.49	0.26	.70	.64*	.51*	.14	1.00

Note. * p < .001, two-tailed.

Primary Hypotheses Results: Jail and Prison

Network quality. The stated hypotheses predicted a number of differences between those reentering the community after incarceration in prison and those reentering the community after incarceration only in jail. In addition, mechanisms by which these differences could be explained were predicted. It was expected that men returning from prison would have networks that were weaker than the networks of those returning from jail in a number of different ways. It was expected that those returning from prison would have smaller networks, a smaller proportion of family members, weaker ties with network members, fewer people they had been in contact with during their incarceration, fewer separate components, a larger proportion of network members who were previously incarcerated, and more components that include network members who were previously incarcerated when compared with those returning from jail (Hypothesis 1a-g).

A series of *t*-tests were used to test these hypotheses and found only one significant difference between the networks of those returning from jail and prison (Table 10). Counter to the hypothesis, men returning from prison (M = 1.31, SD = 1.69) had more components with no formerly incarcerated alters (when isolates were included) than those returning from jail (M = 0.61, SD = 0.86), $t(51.21) = -2.19$, $p = 0.03$.

In order to address this unexpected finding, the ages of returning prisoners were considered. The men returning from prison were older (M = 41.97) than the men returning from jail (M = 35.82). As the prisoners age their network may become more dispersed and more likely to include many components, some of which have no other formerly incarcerated people. Supporting this interpretation, age was found to be significantly correlated with the number of isolates in a network, $r(66) = 0.30$, $p = 0.01$, the number components in a network when isolates are included, $r(66) = 0.42$, $p < 0.001$, and the number of components in a network when isolates are excluded, $r(66) = 0.43$, $p < 0.001$. Additionally, in a hierarchical regression model controlling for age, correctional setting was no longer a significant predictor of the number of components that included no formerly incarcerated individuals when isolates

are included, $b = .50$, $t(65) = 1.52$, $p = 0.13$. Therefore, it appears that the advanced age of men returning from prison means that their network included more individuals who are unconnected to anyone else. Thus, men returning from prison appear to be no more likely than men returning from jail to have components with no formerly incarcerated alters.

The second hypothesis (Hypothesis 2) predicted that the general weakness of the networks of men returning from prison could be explained by the physical and psychological separation of these individuals from society. However, after testing the first set of hypotheses and finding that men returning from prison did not have meaningfully weaker networks than men returning from jail, there was no need to proceed with testing the second hypothesis.

Table 10. Mean Differences Between Men Returning from Jail and Prison

	Jail		Prison			
	M	*SD*	*M*	*SD*	*t*	*df*
Network size	13.21	4.16	14.09	3.49	-0.94	66
Proportion of alters who are family	41.25	25.18	47.13	28.94	-0.89	66
Number of alters who are family	5.00	3.20	6.23	3.88	-1.42	66
Average closeness of ego to alters	3.51	0.67	3.55	0.71	-0.21	66
Proportion of alters who are moderately, very, or extremely close with ego	77.82	20.02	77.44	24.86	0.07	66
Proportion of alters who are very or extremely close with ego	50.73	23.86	54.95	25.69	-0.70	66
Average amount of contact between ego and alters during incarceration (higher number, more contact)	2.27	0.91	2.09	0.78	0.86	65
Proportion of alters that ego had any contact with during incarceration	56.80	27.45	60.33	30.85	-0.50	66
Number of components in network	1.97	1.36	2.83	2.26	-1.92†	56.31
Number of components in network, excluding isolates	1.24	0.44	1.40	0.88	-0.94	50.29
Proportion of alters who have definitely never been incarcerated	56.02	23.61	62.80	25.12	-1.15	66
Number of alters who have definitely never been incarcerated	7.30	3.94	9.00	4.27	-1.70†	66
Proportion of alters who have definitely been incarcerated	36.15	23.41	32.25	24.97	0.66	66
Number of alters who have definitely been incarcerated	4.94	3.50	4.31	3.55	0.73	66
Number of components that include at least one formerly incarcerated person	1.36	1.08	1.51	1.31	-0.51	66
Number of components that include at least one formerly incarcerated person, excluding isolates	1.06	0.56	1.03	0.79	0.19	66
Number of components that have no formerly incarcerated persons	0.61	0.86	1.31	1.69	-2.19*	51.21
Number of components that have no formerly incarcerated persons, excluding isolates	0.18	0.39	0.37	0.73	-1.34	52.67
Proportion of alters who provide emotional support	77.68	22.83	69.09	26.70	1.42	66
Number of alters who provide emotional support	10.12	4.27	9.97	4.26	0.15	66
Proportion of alters who provide instrumental support	61.59	27.38	66.27	22.20	-0.78	66
Number of alters who provide instrumental support	8.24	4.20	9.37	3.98	-1.14	66
Total amount of support provided (sum of supports provided by all alters)	18.36	7.68	19.34	7.74	-0.52	65.83
Total number of alters who provide either type of support	11.00	4.43	11.20	4.01	-0.20	66
Proportion of alters who provide both types of support	55.70	26.22	56.67	25.99	-0.15	66
Proportion of alters who provide at least one type of support	83.57	21.35	78.69	20.97	0.95	66
Cohen's Perceived Stress Scale (higher number, greater stress)	14.63	6.49	12.84	9.65	0.89	58.09

Note. † $p < .1$, * $p < .05$.

Social support. Again *t*-tests were used to determine whether men returning from prison had less support available within their network (Hypotheses 3a-c). There were no significant differences between the amount of emotional, instrumental, and combined support available to men returning from prison and jail (Table 10). It was also hypothesized that any significant differences in support would be explained by the weaker networks of men returning from prison (Hypothesis 4). Because there were no significant differences in support available and no meaningful significant differences in the network strength of men returning to jail and prison, there was no need to test this hypothesis.

Wellbeing. Two hypotheses were posed about the wellbeing of men returning from jail and prison. Men returning from prison were expected to be less well than men returning from jail, as measured by self-perceived stress (Hypothesis 5), and this difference was predicted to be explained by the weaker networks of men returning from prison (Hypothesis 6). *T*-tests showed no significant difference in wellbeing of those returning from jail and from prison (Table 10), which suggested it was unnecessary to test the proposed mediating relationship.

Secondary Hypotheses Results: Scale Measures of Incarceration History

Next exploratory tests were used to examine whether other conditions of participants' incarceration history could predict network quality, network support, and participant wellbeing. Due to the large number of additional exploratory correlations being conducted (270), the Benjamini–Hochberg false discovery rate procedure was used. A false discovery rate allows researchers to control the fraction of false discoveries in a group of *p*-values. It is preferable to familywise error rate procedures, such as a Bonferroni correction, because false discovery rate procedures can localize the error rate to individual tests (Glickman, Rao, & Schultz, 2014). To calculate a Benjamini–Hochberg false discovery rate the *p*-values of all tests are sorted from lowest to highest. Each *p*-value in ascending order is assigned a value *i* from 1 to *n*, where *n* is the total number of tests being conducted. *d* is the likelihood of discovering a

false positive. The false discovery rate for any one test is then the smallest d for which $p \leq d \times i / n$. In this study, correlations were considered meaningful if they had a false discovery rate of .25 or less. At most a quarter of significant tests below the threshold of 0.25 are false discoveries. The remaining examination and discussion of results focus only on the discoveries below the 0.25 threshold. In Table 11, which depicts these correlations, tests that meet this standard are indicated along with the traditional indications of significance. The correlations in Table 11 and the discussion of them can be divided into three types of scale measures: those measuring the participant's most recent incarceration, those measuring the participant's previous incarcerations, and those combining these experiences to measure lifetime incarceration.

Recent incarceration: Duration and distance. Pearson's correlations were first conducted to examine the relationships between scale measures of the participants' most recent incarcerations and network quality, network support, and participant wellbeing. The scale measures of recent incarceration were the total duration of the most recent incarceration and the distance between where a participant lived prior to this incarceration and where they were incarcerated.[4] Only two correlations were significant and had false discovery rates of less than 0.25. There was a significant positive correlation between the duration of recent incarceration and the proportion of networks that participants had contact with during their incarceration, $r(66) = 0.29$, $p = .02$. Further consideration suggests that this finding is logical and does not require further consideration; even though incarceration separates prisoners from their network, for those who are incarcerated for a longer period of time there is more time during which network members could be contact with them.

[4] See the Appendix for details about how Recent Incarceration Distance was calculated if the participant was incarcerated in more than one prison.

Table 11. Correlations Between Additional Measures of Incarceration History and Network Measures

	Recent Incarceration				Previous Incarceration										Lifetime Incarceration					
	Months Incarcerated Total(1)		Distance		Number of Incarcerations		Months Incarcerated in Jail		Months Incarcerated in Prison		Months Incarcerated Total		Distance		Percent of Life Incarcerated		Months Incarcerated		Distance	
	r	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*
Network size	.06	68	.14	67	.07	67	.02	66	-.01	66	.00	66	.02	66	.05	66	.01	66	.10	65
Proportion of alters who are family	.18	68	.05	67	-.07	67	.08	66	-.08	66	-.04	66	-.13	66	.07	66	-.01	66	-.01	65
Number of alters who are family	.20	68	.14	67	-.07	67	.09	66	-.15	66	-.10	66	-.16	66	-.03	66	-.05	66	-.01	65
Average closeness of ego to alters	.17	68	.09	67	.12	67	.25*	66	-.18	66	-.08	66	-.07	66	-.02	66	-.04	66	-.04	65
Proportion of alters who are moderately, very, or extremely close with ego	.12	68	.00	67	.09	67	.12	66	-.27*[a]	66	-.19	66	-.08	66	-.12	66	-.16	66	-.16	65
Proportion of alters who are very or extremely close with ego	.21†	68	.13	67	.13	67	.28*[a]	66	-.09	66	.00	66	-.03	66	.05	66	.04	66	.05	65
Average amount of contact between ego and alters during incarceration (higher number, more contact)	.08	67	-.08	66	.06	66	.19	65	-.02	65	.04	65	.15	65	.14	65	.05	65	.12	64
Proportion of alters that ego had any contact with during incarceration	.29*[a]	68	.08	67	.08	67	.25*	66	.06	66	.12	66	.14	66	.25*	66	.16	66	.14	65
Number of components in network	.07	68	.24†	67	.10	67	.12	66	.25*	66	.24†	66	.25*	66	.12	66	.24†	66	.25*	65
Number of components in network, excluding isolates	.11	68	.19	67	-.01	67	.07	66	.12	66	.12	66	.20	66	.01	66	.13	66	.25*	65

Note. † $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$. [a] False Discovery Rate < .25.

Table 11. Correlations Between Additional Measures of Incarceration History and Network Measures (Continued)

	Recent Incarceration				Previous Incarceration										Lifetime Incarceration					
	Months Incarcerated Total(1)		Distance		Number of Incarcerations		Months Incarcerated in Jail		Months Incarcerated in Prison		Months Incarcerated Total		Distance		Percent of Life Incarcerated		Months Incarcerated		Distance	
	r	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*
Proportion of alters who have never been incarcerated	.21†	68	.16	67	-.18	67	-.22†	66	-.26*[a]	66	-.28*[a]	66	-.27*[a]	66	-.29*[a]	66	-.23†	66	-.14	65
Number of alters who have never been incarcerated	.21†	68	.23†	67	-.12	67	-.19	66	-.19	66	-.21†	66	-.21†	66	-.25*	66	-.16	66	-.01	65
Proportion of alters who have been incarcerated	-.16	68	-.10	67	.26*	67	.26*[a]	66	.29*[a]	66	.31*[a]	66	.32**[a]	66	.34**[a]	66	.27*[a]	66	.17	65
Number of alters who have been incarcerated	-.15	68	-.07	67	.27*[a]	67	.28*[a]	66	.23†	66	.27*[a]	66	.32**[a]	66	.27*[a]	66	.23†	66	.13	65
Number of components that include at least one formerly incarcerated person	.04	68	.09	67	.03	67	.17	66	.28*[a]	66	.28*[a]	66	.32**[a]	66	.18	66	.27*[a]	66	.19	65
Number of components that include at least one formerly incarcerated person, excluding isolates	.04	68	.09	67	-.05	67	.18	66	.22†	66	.24†	66	.37**[a]	66	.12	66	.23†	66	.25*	65
Number of components that have no formerly incarcerated persons	.06	68	.26*[a]	67	.11	67	.03	66	.09	66	.08	66	.06	66	.01	66	.09	66	.18	65
Number of components that have no formerly incarcerated persons, excluding isolates	.09	68	.14	67	.04	67	-.13	66	-.11	66	-.13	66	-.18	66	-.13	66	-.11	66	.01	65

Note. † $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$. [a] False Discovery Rate < .25.

Table 11. Correlations Between Additional Measures of Incarceration History and Network Measures (Continued)

	Recent Incarceration				Previous Incarceration								Lifetime Incarceration					
	Months Incarcerated Total(1)		Distance		Number of Incarcerations		Months Incarcerated in Jail		Months Incarcerated in Prison		Months Incarcerated Total		Distance		Percent of Life Incarcerated		Months Incarcerated		Distance	
	r	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*
Proportion of alters who provide emotional support	-.04	68	-.08	67	.05	67	.15	66	-.35**[a]	66	-.25*	66	-.12	66	-.22†	66	-.24†	66	-.29*[a]	65
Number of alters who provide emotional support	-.02	68	.07	67	.05	67	.10	66	-.23†	66	-.17	66	-.06	66	-.19	66	-.16	66	-.09	65
Proportion of alters who provide instrumental support	.04	68	.15	67	-.05	67	-.06	66	-.33**[a]	66	-.29*a	66	-.09	66	-.18	66	-.27*[a]	66	-.07	65
Number of alters who provide instrumental support	.05	68	.21†	67	-.01	67	-.03	66	-.25*	66	-.21†	66	-.03	66	-.17	66	-.19	66	.05	65
Total amount of support provided (sum of supports provided by all alters)	.01	68	.15	67	.02	67	.04	66	-.26*	66	-.20	66	-.05	66	-.19	66	-.19	66	-.02	65
Total number of alters who provide at least one type of support	.05	68	.12	67	.00	67	.07	66	-.21†	66	-.16	66	-.06	66	-.16	66	-.14	66	-.01	65
Proportion of alters who provide at least one type of support	.04	68	.00	67	-.03	67	.11	66	-.35**[a]	66	-.26*[a]	66	-.13	66	-.19	66	-.24†	66	-.21†	65
Proportion of alters who provide both types of support	-.03	68	.06	67	.03	67	.01	66	-.36**[a]	66	-.30*[a]	66	-.08	66	-.23†	66	-.29*[a]	66	-.18	65
Cohen's Perceived Stress Scale (higher number, greater stress)	-.13	66	-.11	65	-.19	65	-.38**[a]	64	-.03	64	-.13	64	-.07	64	-.13	64	-.15	64	-.06	63

Note. † $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$. [a] False Discovery Rate < .25.

There was also a significant positive relationship between the distance of the recent incarceration and number of components that do not include previously incarcerated people (including isolates as components). Those who were incarcerated further from where they had lived before this incarceration had more components without previously incarcerated alters, $r(65) = 0.26$, $p = 0.03$. This is counter to what would have been predicted, and again age may provide an explanation. Those who are incarcerated far from home are more likely to be incarcerated in prison, $r(65) = 0.78$, $p < .001$, and, as discussed previously, men returning from prison are older on average than are men returning from jail. Indeed, the distance of the recent incarceration and age were positively correlated, in that older prisoners were incarcerated farther from home, $r(65) = 0.27$, $p = .03$, and distance was no longer a significant predictor after controlling for age in a hierarchical regression, $b = 0.24$, $t(64) = 1.56$, $p = 0.12$.

The remaining correlations between recent incarceration scale measures and dependent variables were not significant. Together these findings suggest that there is little evidence from this study that the conditions of participants' most recent incarceration predict characteristics of their networks, support, and wellbeing in any meaningful way.

Previous incarcerations. The relationship between participants' incarceration history prior to their most recent incarceration and network quality, network support, and wellbeing were then examined. The following correlations were significant and had acceptable false discovery rates.

The number of times participants estimated they were incarcerated prior to their most recent incarceration predicted the numbers of alters in their network who were formerly incarcerated, $r(65) = 0.27$, $p = 0.03$. A greater number of previous incarcerations predicted a greater number of formerly incarcerated people in their network.

Similarly, those who had spent more months previously incarcerated in jail had a larger proportion of formerly incarcerated alters in their network, $r(64) = 0.26$, $p = 0.03$, and a greater number of formerly incarcerated alters in their network, $r(64) = 0.28$, $p = 0.02$.

The number of months participants were previously incarcerated in prison was also significantly positively correlated with the proportion of alters who were formerly incarcerated, $r(64) = 0.29$, $p = 0.02$, and significantly negatively correlated with the proportion of alters who were never incarcerated, $r(64) = -0.26$, $p = 0.03$ (this is not an inverse relationship, as some participants did not know whether some alters were formerly incarcerated). Also, those who were previously incarcerated in prison for more time had significantly more components that included other formerly incarcerated people, $r(64) = 0.28$, $p = 0.02$.

Looking at the number of months spent in jail and in prison combined, this significantly negatively correlated with the proportion of alters who were never incarcerated, $r(64) = -0.28$, $p = 0.02$, and significantly positively correlated with the proportion of alters who were formerly incarcerated, $r(64) = 0.31$, $p = 0.01$, and the number of alters who were formerly incarcerated, $r(64) = 0.27$, $p = 0.03$. Those who were incarcerated for a greater number of months previously in both jail and prison was also were also significantly more likely to have more network components that included other formerly incarcerated individuals, $r(64) = 0.28$, $p = 0.02$.

The distance participants were incarcerated from their former residences during previous incarcerations also significantly predicted measures of alter incarceration history. Incarceration distance during previous incarcerations significantly correlated with the proportion of alters who were never incarcerated, $r(64) = -0.27$, $p = 0.03$, the proportion of alters who were formerly incarcerated, $r(64) = 0.32$, $p = 0.01$, and the number of alters who were formerly incarcerated, $r(64) = 0.32$, $p = 0.01$. This distance was also positively correlated with the number of components in participants' networks that included other formerly incarcerated individuals, both including isolates, $r(64) = 0.32$, $p = 0.01$, and excluding isolates, $r(64) = 0.37$, $p = 0.002$. Participants who were incarcerated further from their former residences during previous incarcerations had a smaller proportion of alters with no incarceration history, a larger proportion of alters who were formerly incarcerated, a

greater number of alters who were formerly incarcerated, and more components that included formerly incarcerated alters.

Previous incarcerations also predicted certain measures of closeness between participants and their alters. The number of months that participants were previously incarcerated in prison negatively correlated with the proportion of alters with whom the participant was moderately, very, or extremely close, $r(64) = -0.27$, $p = 0.03$. Those who had spent more time in prison have a smaller proportion of alters with whom they are moderately, very, or extremely close, and a large proportion of alters with whom they are only slightly close or not at all close. Unexpectedly, the number of months that a participant was previously incarcerated in jail positively correlated with the proportion of alters with whom they were very close or extremely close, $r(64) = 0.28$, $p = 0.02$. Those who had spent more time in jail prior to their most recent incarceration were more likely to have a network with a larger proportion of alters with whom they are very close or extremely close. This finding is unexpected, and I will examine it further in Chapter 6.

Also counter to expectations, men who had spent more time in jail were more likely to report less stress after this most recent incarceration, $r(62) = -0.38$, $p = 0.002$. The same was not true for participants who had spent more time in prison. These findings are explored in more depth later in this results section and in Chapter 6.

Previous correctional history was also significantly correlated with a number of support measures. Those who had spent more time in prison previously were more likely to have a smaller proportion of their network who they could go to for emotional support, $r(64) = -0.35$, $p = 0.004$, and a smaller proportion of their network they would go to for instrumental support, $r(64) = -0.33$, $p = 0.01$. More time spent in prison previously was also significantly correlated with the proportion of alters who could provide any one type of support (emotional or instrumental), $r(64) = -0.35$, $p = 0.004$, and the proportion of alters who could provide <u>both</u> emotional and instrumental support, $r(64) = -0.36$, $p = 0.003$.

The combined amount of time previously incarcerated in jail and prison was significantly negatively correlated with the proportion of their network that participants could turn to for instrumental support, $r(64) = -0.29$, $p = 0.02$, the proportion of alters who could provide any one type of support (emotional or instrumental), $r(64) = -0.26$, $p = 0.03$, and the proportion of alters who could provide both emotional and instrumental support, $r(64) = -0.30$, $p = 0.01$. Amount of time previously incarcerated only in jail did not significantly predict any measures of support.

Lifetime incarceration. Finally, correlations between lifetime measures of incarceration (combining previous incarceration and most recent incarceration) and outcome variables were examined. The total months a participant was incarcerated throughout his lifetime was significantly correlated with the proportion of alters who were formerly incarcerated, $r(64) = 0.27$, $p = 0.03$, and the number of components that included formerly incarcerated people, $r(64) = 0.27$, $p = 0.03$. Men who were incarcerated longer throughout their lifetime had a larger proportion of alters who were formerly incarcerated and more components that include other formerly incarcerated individuals.

The proportion of a participant's life during which he was incarcerated was found to predicted outcome measures. Those who had spent a larger proportion of their lifetime incarcerated were more likely to have a smaller proportion of their alters who were never incarcerated, $r(64) = -0.29$, $p = 0.02$, a larger proportion of their alters who were formerly incarcerated, $r(64) = 0.34$, $p = 0.01$, and a greater number of alters who were formerly incarcerated, $r(64) = 0.27$, $p = 0.03$.

Total months incarcerated throughout a lifetime also significantly predicted measures of support. Those who were incarcerated for longer throughout their lives had a significantly smaller proportion of alters who they could go to for instrumental support, $r(64) = -0.27$, $p = 0.03$, and a significantly smaller proportion of their network that they could go to for both instrumental and emotional support, $r(64) = -0.29$, $p = 0.02$.

Additionally, lifetime distance was a significant predictor of the proportion of alters to whom the participant could go to for emotional support, $r(64) = -0.30$, $p = 0.02$. The further from home a participant had been incarcerated throughout their lifetime, the fewer alters the participants could go to for emotional support.

Summary of correlations. Tests of both the primary and secondary hypotheses provided little evidence that the conditions of a participant's most recent incarceration had an effect on his social networks, social support, or psychological wellbeing. The few significant tests examining recent incarceration conditions and outcome measures could be explained by age or by a logical explanation that was not previously considered.

However, social network measures, social support, and stress were predicted by certain conditions of previous incarcerations and lifetime incarceration. Previous incarceration and lifetime incarceration conditions significantly predicted the presence of other formerly incarcerated individuals in networks. It is also notable that previous prison experience predicted the proportion of the network with whom alters are moderately, very, or extremely close, that previous and lifetime incarcerations predicted support, and that previous jail experience predicted wellbeing upon release. These relationships are explored in greater depth in the subsequent analyses.

Additional regressions and mediations. Not all of the significant correlations could be explained by age or previously unconsidered explanations. In order to better understand the relationships between incarceration history and closeness with alters, incarceration history of alters, support, and wellbeing, a series of regression and mediation analyses were completed.

Pearson's correlations have demonstrated that the proportion of alters who were moderately, very, or extremely close with the participant decreased as time previously incarcerated in prison increased, and conversely, the proportion of alters who were slightly or not at all close increased as time previously incarcerated in prison increased. Subsequently, a regression was conducted, controlling for participant age and seriousness of their most

recent conviction. Although the overall model did not significantly predict the proportion of alters who were moderately close or closer, $F(3, 59) = 1.52$, $p = 0.22$, time previously incarcerated in prison remained a significant predictor of the proportion of alters who were moderately close or closer, even after controlling for age and seriousness of crime, $b = -0.10$, $t(62) = -2.28$, $p = 0.05$. Therefore, the relationship between previous time spent in prison and closeness with alters is not likely due to changes in relationships due to age or due to alters response to the nature of the crime itself.

To better understand how previous time spent in prison could affect participants' closeness with alters, prisonization and sense of Inclusion of Ingroup in Self were tested as possible mediators. It was predicted that the more time an individual was previously incarcerated in prison, the more psychologically separated they were from society (as measured by prisonization and Inclusion of Ingroup in Self), which subsequently made it more difficult to feel close with alters after their release. However, before conducting a mediation analysis prisonization, the three subscales of prisonization, and the two measures of Inclusion of Ingroup in Self were correlated with both the predictor and outcome variables. The proposed mediating variables did not correlate with previous time spent in prison or the proportion of alters who are moderately close or closer to the participant (Table 12). The present findings do not currently support the possibility that measures of psychological change and inclusion could mediate the relationship between time spent previously in prison and closeness with alters.

Table 12. Correlations Relevant to Proposed Mediations

	Prisonization Overall		Deserving of Regulation (DS & DI)		Emotional Guarding (H & EO)		Social Withdrawal		IIS: People Inside Jail & Prison		IIS: People Outside Jail & Prison		Proportion of alters who are moderately close or closer to ego [a]	
	r	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*
Number of Incarcerations (Previous)	.12	62	-.02	62	.11	62	.19	62	.19	66	.02	66		
Months Incarcerated in Jail (Previous Incarceration)	-.01	61	-.17	61	.08	61	-.01	61	.23	66	-.03	66		
Months Incarcerated in Prison (Previous Incarceration)	-.04	61	-.10	61	-.01	61	.02	61	.14	66	-.17	66		
Months Incarcerated Total (Previous Incarceration)	-.04	61	-.13	61	.01	61	.02	61	.18	66	-.15	66		
Distance (Previous Incarceration)	.04	61	-.05	61	.08	61	.01	61	.19	66	-.20	66		
Percent of Life Incarcerated	.09	61	-.12	61	.17	61	.10	61	.23†	66	-.18	66		
Months Incarcerated (Lifetime)	-.06	61	-.18	61	.00	61	.03	61	.17	66	-.13	66		
Proportion of alters who are moderately close or closer to ego	.24†	61	.09	61	.25†	61	.14	61	.08	66	.12	66		
Proportion of alters who have definitely never been incarcerated	-.02	61	-.01	61	-.05	61	.08	61	-.15	66	.23†	66		
Proportion of alters who have definitely been incarcerated	.11	61	.08	61	.15	61	-.08	61	.19	66	-.25*	66		
Number of alters who have definitely been incarcerated	.10	61	.10	61	.12	61	-.11	61	.29*	66	-.16	66		
Number of components that include at least one formerly incarcerated person	-.17	61	-.03	61	-.15	61	-.25†	61	.02	66	.10	66		
Number of components that include at least one formerly incarcerated person, excluding isolates	-.05	61	.00	61	.01	61	-.22†	61	.15	66	.18	66		

Note. † $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$. [a] Values are only included in this column if they are relevant to proposed mediations.

Table 12. Correlations Relevant to Proposed Mediations (Continued)

	Prisonization Overall		Deserving of Regulation (DS & DI)		Emotional Guarding (H & EO)		Social Withdrawal		IIS: People Inside Jail & Prison		IIS: People Outside Jail & Prison		Proportion of alters who are moderately close or closer to ego [a]	
	r	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*	*r*	*N*
Proportion of alters who provide emotional support	-.10	61	.04	61	-.07	61	-.27*	61	.18	66	.21†	66	.49***	66
Proportion of alters who provide instrumental support	-.03	61	-.02	61	.03	61	-.21	61	.17	66	.16	66	.29*	66
Number of alters who provide instrumental support	-.14	61	-.01	61	-.12	61	-.26*	61	.20	66	.22†	66	.22†	66
Total amount of support provided (sum of supports provided by all alters)	-.20	61	.01	61	-.19	61	-.32*	61	.22†	66	.29*	66	.27*	66
Proportion of alters who provide at least one type of support	-.02	61	-.02	61	.04	61	-.18	61	.26*	66	.11	66	.44***	66
Proportion of alters who provide both types of support	-.10	61	.03	61	-.07	61	-.31*	61	.13	66	.27*	66	.39**	66
Cohen's Perceived Stress Scale (higher number, greater stress)	.34 **	60	.10	60	.30*	60	.41**	60	.01	64	-.49***	64		

Note. † $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$. [a] Values are only included in this column if they are relevant to proposed mediations.

Next prisonization and the Inclusion of Ingroup in Self scales were examined as possible mediators for the relationships between incarceration history and incarceration history of alters. If this were the case, those who were incarcerated for more time and further from home would have become psychologically separated and changed in ways that made it more likely they would connect with other people who are formerly incarcerated and less likely to connect with people who are not formerly incarcerated. Prisonization and its subscales were not significantly correlated with any of the proposed independent or dependent variables (Table 12). There were significant correlations between Inclusion of Ingroup in Self measures and some of the alter incarceration history measures. Sense of inclusion with incarcerated persons was significantly correlated with the number of alters in a network who were formerly incarcerated, $r(61) = 0.29$, $p = 0.02$; those who shared a greater sense of identity with this group were more likely to have a greater number of alters who were formerly incarcerated. Sense of inclusion in society outside of jail and prison significantly correlated with the proportion of alters who were formerly incarcerated, $r(61) = -0.25$, $p = 0.04$. Those who shared a greater sense of identity with people outside of prison and jail were more likely to have a smaller proportion of alters who were formerly incarcerated. However, Inclusion of Ingroup in Self measures were not significantly correlated with any of the incarceration history measures. Therefore, there it is not possible that prisonization or Inclusion of Ingroup in Self significantly mediates the relationships between incarceration history and alter incarceration history, and there was no need to proceed with mediation testing.

Next, possible mediators were considered to explain the relationship between incarceration history measures and support. Prisonization was first examined to explain these relationships. Prisonization and its Emotional Guarding and Deserving of Regulation subscales were not correlated with any support measures. However, the Social Withdrawal Prisonization subscale predicted the proportion of alters who could provide emotional support, $r(59) = -0.27$, $r = 0.04$, the number of alters who could provide instrumental support,

$r(59) = -0.26$, $p = 0.05$, the total number of supports provided, $r(59) = -0.32$, $p = 0.01$, and the proportion of alters who provide both types of support, $r(59) = -0.31$, $p = 0.02$. Those who experienced prisonization in a way that manifested itself in social withdrawal were significantly more likely to have smaller proportions of alters that could provide emotional support, fewer alters that could provide instrumental support, more support available overall, and a larger proportion of alters who could provide two types of support. However, Social Withdrawal did not correlate with any potential independent variables, so it cannot mediate the relationship between incarceration history and support.

Inclusion of Ingroup in Self measures were also examined to determine if they could mediate the relationship between incarceration history and support. Sense of inclusion with incarcerated persons significantly predicted the proportion of alters in a network who provided at least one type of support, $r(64) = 0.26$, $p = 0.03$. Those who shared a sense of identity with other incarcerated individuals were significantly more likely to have a smaller proportion of their network to whom they could go for at least one type of support. Sense of inclusion in society outside of jail and prison significantly predicted total amount of support available, $r(64) = 0.29$, $p = 0.02$, and significantly predicted the proportion of alters who provided both types of support, $r(64) = 0.27$, $p = 0.03$. However, again, neither of these possible mediators, correlated with any independent variables, suggesting that Inclusion of Ingroup in Self measures could not explain the relationships between incarceration history and support.

The proportion of alters who were moderately close or closer with participants was also examined to determine if it could explain relationships between incarceration history and support. As discussed previously, the number of months previously spent in prison significantly predicted the proportion of alters with whom the participant is moderately close or closer, $r(64) = -0.27$, $p = 0.03$. Participants who spent more time previously in prison were significantly less likely to have a larger proportion of alters with whom they were moderately close or closer and significantly more likely to have a larger proportion of alters with whom they were only slightly close or not at all close. The proportion of alters with whom

participants are moderately close or closer significantly predicted the proportion of alters who can provide emotional support, $r(64) = 0.49$, $p < 0.001$, the proportion of alters who can provide instrumental support, $r(64) = 0.29$, $p = 0.02$, the total amount of support available, $r(64) = 0.27$, $p = 0.03$, the proportion of alters who provide a least one type of support, $r(64) = 0.44$, $p < 0.001$, and the proportion of alters who provide both types of support, $r(64) = 0.39$, $p = 0.001$. Due to these significant correlations, mediation analyses proceeded to examine whether the proportion of alters who were moderately close or closer with participants could explain the relationships between previous time spent in prison and support. If such a mediation werer found it would suggest that the more time an individual was incarcerated in prison before their most recent incarceration, the less close their relationships with people outside of prison were, which ultimately would lead to less support available to them after their most recent incarceration.

Five mediation relationships were conducted, one for each significant support measure. The PROCESS macro in SPSS (Hayes, 2016) was used to obtain bootstrap estimates with 5,000 bootstrap samples and 95% confidence intervals. Results suggested that there were no indirect effects of previous time spent in prison on measures of support through closeness with alters (Table 13). Although those who have spent more time previously in prison do have significantly less support available to them (as measured in five ways) and have less people in their network with whom they have relationships that are moderately close, very close, or extremely close, the amount of time previously spent in prison does not impact access to support through diminishing the closeness of relationships.

Table 13. Indirect Effects of Previous Months Incarcerated on Outcome Variables

Indirect effect tested:

X→M→Y, where:

X = Months Incarcerated in Prison (Previous Incarceration)

M = Proportion of alters who are moderately close or closer to ego

	Direct effects of X→Y		Indirect effect of X→Y	95% confident interval	
Outcome Variable (Y)	*B* (SE)	*p*	Point *(SE)*	Lower	Upper
Proportion of alters who provide emotional support	-0.09 (0.04)	0.04	-0.04 (0.04)	-0.14	0.01
Proportion of alters who provide instrumental support	-0.10 (0.05)	0.03	-0.02 (0.02)	-0.09	0.004
Total amount of support provided (sum of supports provided by all alters)	-0.02 (0.01)	0.11	-0.01 (0.01)	-0.03	0.001
Proportion of alters who provide at least one type of support	-0.08 (0.04)	0.03	-0.03 (0.03)	-0.12	0.003
Proportion of alters who provide both types of support	-0.11 (0.04)	0.02	-0.03 (0.03)	-0.11	0.01

Note. Mediation is significant when the 95% confidence interval does not include zero.

The final relationship to be explored in greater depth is the negative correlation between previous time spent in jail and stress or wellbeing after release. As discussed previously, at the onset of this study it would have seemed reasonable to assume that those who spent more time incarcerated in any type of facility would have lessened wellbeing upon release; however, those were spent more time previously in jail were significantly less likely to be stressed, $r(62) = -0.38$, $p = 0.002$. Part of prisonization theory suggests that institutionalization allows prisoners to adapt to prison, temporarily increasing their ability to function and decreasing their stress, but ultimately creating harm upon release (Haney, 2003) In fact, Zamble (1992) found that over the course of a prisoner's incarceration their levels of depression and anxiety decreased. It is possible that those who have adjusted to the difficult

condition in prisons and jails have also adjusted to the difficulty and stress of reentry. This may be especially true for people who have spent a great deal of time in jail. Because incarcerations in jail are typically short, if someone has spent many months in jail in the past, it is likely that this occured over the course of many incarcerations, thus accumulating, not only jail experience, but also, reentry experience. Therefore, even if the process of reentry is difficult, they are accustomed to it, and thus feel less stress when it occurs. Just as prisonization decreases stress during incarceration, prisonization may also decrease stress after more time in jail and more releases from jail. The other measure of psychological separateness, Inclusion of Ingroup in Self, could also serve to explain the relationship between time incarcerated in jail previously and stress.

Before conducting any tests for mediation, the correlations between the possible mediators and the predictor and outcome variables were examined. Stress was correlated with the overall prisonization scale, $r(58) = 0.34$, $p = 0.01$, the Emotional Guarding prisonization subscale, $r(58) = 0.30$, $p = 0.02$, the Social Withdrawal subscale, $r(58) = 0.41$, $p = 0.001$, and sense of Inclusion in the Ingroup of society outside of jail and prison, $r(62) = -0.49$, $p < 0.001$. Those who experienced more prisonization, more prisonization in the form of Emotional Guarding, more prisonization in the form of Social Withdrawal, and less inclusion in society outside of jail and prison were more likely to feel greater stress upon release. However, time spent in jail previously did not significantly correlate with any of the potential mediator variables. These findings suggest that not only do prisonization and Inclusion of Ingroup in Self measures fail to explain the relationship between time incarcerated in jail previously and stress, but also that those who experience greater prisonization feel more stress upon release, not less. This suggests that those who previously spent a greater amount of time incarcerated in jail do not experience less stress due to psychological changes such as prisonization.

Chapter 5: Qualitative Results

The analysis of participants' qualitative answers focused on two key areas: 1) the effects of incarceration on relationships and 2) the barriers and facilitators for connection during and after incarceration. A thematic analysis was conducted following the guidelines provided by Braun and Clarke (2006). The six steps recommended by Braun and Clarke (2006), utilized in this analysis were: 1) familiarizing self with the data, 2) generating initial codes, 3) searching for themes, 4) reviewing themes, 5) defining and naming themes, and 6) producing the report. The quotes in the following analysis were notes that were taken by interviewer as the participant spoke. In some instances, the quotes are approximations of what the participant said.

Effects of Incarceration on Relationships

Six themes were present that addressed the effects of incarceration on the participants' relationships. The first theme addresses the separation that participants felt due to their incarceration. Participants widely discussed the physical and emotional distance created by incarceration and the subsequent harm it caused. Participant 45 said, "How can you keep a relationship if you're hundreds of miles away?". Some participants chose to use metaphors to illustrate the distance they felt. Participant said regarding the relationships that suffered—"out of sight out of mind." Two participants also chose to use metaphors of worlds and planets; Participant 48 describe prison as being "a different world," while Participant 1 said, "I'm on another planet. […] It's like I went to Mars." The physical and emotional distance and separation was a clear negative consequence that incarceration had on participants' networks.

However, this was not the only negative effect that emerged in participants' qualitative responses. Many participants discussed the emotional distress their families experienced due to their involvement in crime and their incarceration. They often used the words "disappointment" or "hurt" to describe the experiences their network, especially their family, went through. Alternatively, sometimes they described their networks' members' anger

and frustration. The theme of emotional distress is evident in Participant 29's description of his network's reaction to the times he was previously incarcerated. He explains that he has "pretty much been going in and out of jail and prison for years and years. [It] really lets them down." Participant 19 says that he is "worried about how people who I respect and love see me." The emotional impact of the incarcerations on network members may seem to the participants like their family is being punished along with them. Participant 48 says, "For them it's like being locked up too". The prevalence of this theme suggests that network members' emotional distress is an integral feature of the harm done to participants' relationships after incarceration. However, this distress is often seen by the participant to be not merely a result of the incarceration itself, but rather a result of a long history of criminal involvement. Additionally, the manner in which these emotional reactions are typically discussed suggests that the participants who touch on this theme are reflecting on the impact their criminal involvement and incarcerations have had on the people they care about. As Burisk (1999) suggested, respect may be a mechanism by which social groups exercise control over those involved in crime. With this in mind, the loss of respect and the emotional distress that participants perceive their network members feeling could serve to reduce criminal involvement.

Qualitative anaysis also suggested that our participants were upset by the relationship loses they experienced during incarceration. Even though our quantitative data did not demonstrate an effect of incarceration on network size, lost relationships were a prominent theme across interviews. Participants described how incarceration ended their romantic relationships, marriages, engagements, and friendships.

There were a variety of reasons participants gave for losing relationships. A number of participants described deaths that occurred during their most recent incarceration. Some simply lost contact with network members. Those who did not stay in touch were often described as not being a "real friend." Participant 12 said, "I lost my expectations of people as far as what I thought. [That] showed me who my real friends were." Participants also

described how they would purposefully distance themselves from some network members. Some did this because they said they needed to focus on improving themselves, while for others this seemed to be a reaction to the hurt they felt when they did not receive more support during their incarceration. Participant 7 said “If [I] ever gets incarcerated again [I] just needs to remember that [I’m] alone in this world. [I] came into the world alone and I will leave alone.” However, many participants spoke about purposefully removing “toxic” friends, or those individuals who were a negative influence on their lives, from their networks. These friends were sometimes described as drug users, who the participant were purposefully separating from now that they were sober. This theme is an example of how changes in networks after incarceration are not always negative.

However, there is also instability in losing these individuals, even if they were negative influences. Participant 58 describes the changes occurring in his network, “I'm changing and learning to build up a new and healthier network, but I did have a network of support so to speak from that group even if it wasn't as positive.” This suggests that even the removal of individuals who were negative influences from a network could itself have a negative effect on the individual. They may lose the negative influence, but also lose the support that those individuals provided. This finding has also been demonstrated by other researchers who found that often drug use and criminal activity separated individuals from the positive influences in their life (Graffam et al., 2004), leaving them alone and isolated when they separated themselves from friends who were negative influences (Nelson et al., 1999).

However, not all relationships that society (or the criminal justice system) would label as negative or “toxic” were lost. Some participants described value in relationships that others would consider to be negative influences and continued to maintain these relationships. I identified this theme as value in “negative” relationships. Although not as prevalent in interviews as the previously discussed themes, this theme makes an important point about the complexity of relationships. Participants sometimes described relationships with formerly

incarcerated individuals, former substance abusers, and gang members that provided support they felt they could not get elsewhere. Thoits (2011) described the value of “similar others,” who may be familiar with the stresses an individual is going through, allowing them to offer support such as information, advice, empathy, and modeling of coping. Some participants in the present study found support in a network of people in recovery like themselves. Others were part of supportive family groups that faced societal stigma, due to their gang involvement or drug addictions. Participant 42 said in defense of his network members who were involved in gangs, "they are my family, my friends, people I went to school with." These are the individuals with whom they are close and to whom they can relate.

Although many participants described in detail the negative consequences incarceration had on their relationships, a substantial proportion of participants indicated that they felt that their incarceration had a positive effect on relationships. This interpretation seemed to emerge from two trains of thought. The first came from individuals who suffered from drug addiction and saw their incarceration as an opportunity to become sober. Participant 65 explains how he and his family see jail as an opportunity to sober up. “They know when [I] go to jail that [I’m] a lot less likely to die. [I] program when [I’m] in jail. When [I] get some clean time [I] lose [the] obsession with using and [I] wants to change. Unfortunately, [I’m] one of those types of people who only can get clean in jail.” Participants’ new found sobriety then allowed them to improve relations with their family and friends. Participant 51 said that his mother was “stoked that [I’m] working towards [my] sobriety more.” The people who care about them are happier and more willing to connect when the participant is sober and doing well.

The second variation on this theme suggests that the trials and difficulties that incarceration creates can bring the participant and their network members closer. Participant 55 said, “I felt like I found out how much they care and stuff about me. I might have become a little closer with them.” Similarly, Participant 34 said, “I think it grew us closer together… More

appreciation for time and not wanting to waste it… People are happy to see me back […] with my family and with my church and children." These participants are not saying that incarceration itself was a positive experience, but rather that it was a negative experience during which their networks continued to support them, care for them, and miss them. It was this ongoing caring during a difficult time that ultimately had a positive effect.

However, the impact of incarceration on relationships may not be as simple as being "positive" or "negative." Some individuals who described the positive effects of their incarceration on their relationships, also seemed unsure of the ultimate impact. They may have outlined both the positives and negatives that arouse from their incarceration or else described how incarceration did not affect their relationships, before going on to give examples of how it did. Other participants believed that incarceration had no effect on their personal relationships, but the comments accompanying these statements suggest that reality may be more complex. I called this theme relationship ambiguity.

In some instances, the contradictory nature of relationship ambiguity may demonstrate the diversity of relationships, both between and within networks. Participant 15 outlined the positives and negatives he saw; "It shows who your real friends are. For some you grow apart and others you grow together." Evidently, going through the struggles of incarceration together does not make all relationships stronger. The relationships participants have with their network members are versatile, and while some may be positively affected by the incarceration, not all are.

However, many responses exemplify a different form of relationship ambiguity, where the participant seems to want to believe that their incarceration had no effect or a positive effect on their relationships, while also questioning this belief. Some participants stated that there was no effect while simultaneously outlining the negative consequences their incarcerations had on their network members. For example, Participant 27 said, "It's stressful for them especially for the ones you were in contact with. Relationships did not change though." Similarly, Participant 3 explains how incarceration had no effect on his relationships,

before saying the negative impact it did have. “[I] don’t think it's hurt the relationships. It's just disappointment from […] family.” Here we see a declaration that his family was not hurt, before he goes on to describe a type of hurt they did feel—disappointment. Participant 12 said in response to being asked how incarceration affected his relationships, “Not really at all honestly… at least not too badly. It has been affected some friends who I thought would stick by me [who] never answered.” These responses may be a sign of misplaced optimism, where they hope to see the situation as better than it is. However, misplaced optimism may be adaptive. Previous research has shown that ex-convicts who ultimately succeed in desisting from crime give “highly positive accounts [that] bore almost no resemblance to the ugly realities of the ex-offenders' lives" (Maruna, 2001, p. 9). Therefore, asserting that incarceration had no effect or a positive effect may be an adaptive strategy, which keeps individuals from seeing only the bad of their situation, and allows them to continue to create positive change in their lives.

Barriers and Facilitators for Reconnection

The barriers to reconnection and the facilitation of connecting often overlapped with one another. Participants who had access to a certain resource may call it a facilitator, while those who did not have access to it would call it a barrier. In the subsequent analysis I first discuss barriers before proceeding to discuss facilitators; however, these ideas are inextricably linked, and sometimes I discuss a facilitator in the context of a barrier and vice versa.

There were two predominant themes I found in participants’ discussions about barriers to reconnecting with and reintegrating into society outside of prison. The first were program and supervision restrictions. Probation departments, sober living environments, and other reentry programs may set restrictions on their clients in order to keep them from reoffending and to facilitate the transition back into the community. However, some participants felt that these restrictions hindered, rather than helped them reintegrate into the community. Participant 35 says, “There is a lack of communication with the many layers of

supervision I have. I have an ankle monitor which I have to communicate through CAPs[5], which is not the same as probation, which is not the same as my halfway house, which makes it really complicated to do anything...". While this response does not explicitly reference relationships, it is clear that these restrictions make it hard to act as other non-incarcerated people do. In this way, it is difficult for formerly incarcerated individuals to assimilate back into the non-incarcerated community.

Sometimes participants were more explicit about how these restrictions affected their relationships. Inpatient substance abuse facilities and other transitional house may have blackout periods during which a client has additional restrictions at the beginning of their stay at the facility. Participant 9 described how these restrictions prevented him from connecting with his family. "Transitional housing has rules set up where you have a two-week blackout period, where you cannot contact anybody or let people know that you are safe or get online or tell any family member that I am safe or apply for MediCAL or my license (drivers). It's very stressful that I am not able to take care of business or the things I need in order to feel safe and protected." This participant, like the previous individual, highlights the difficulty reintegrating when he cannot "take care of business" as other individuals in society do, but he is also straightforward about how these restrictions have made it difficult to reach out to family and update them about him current condition. Dissatisfaction with program cell phone policies also appeared throughout the discussion of barriers to reconnecting with family. Participant 36 said, "[I] can't have a cellphone at the program that I'm at or internet. If we could have cellphones that would help us reconnect easier." This theme suggests that even policies that are intended to help those reentering can have impact on their ability to reintegrate back into the community.

[5] CAP is an abbreviation used for Custody Alternative Program where individuals are physically no longer incarcerated, but continue to be monitored using ankle monitors.

The second theme evident from participants' discussion of barriers to reconnecting and reintegrating with the community was what some scholars have referred to as invisible punishments (Travis, 2002). These are civic and legal restrictions placed on formerly incarcerated individuals that limit their access to housing, employment, voting, and financial aid, to name a few, that serve to continue to punish formerly incarcerated individuals long after their incarceration is over. These restrictions continue to highlight how the formerly incarcerated individual is different from other non-incarcerated individuals even when they are no longer physically separated.

One participant talked about how having a felony on his record made it difficult for him to get a job and subsequently reintegrate in to his family. "I keep trying and hope I get a chance but going through a thousand no's before a yes... not having a job makes it hard to be productive and accepted by my family" (Participant 57). This response highlights how invisible punishments create barriers to being accepted as a functional member of society. Another participant (38) described how his formerly incarcerated status itself created judgment and stigma that impacted his employment chances and other aspects of his life. "Employment barriers, dating barriers… It's hard to get back into the world if you've done a lot of time… Getting categorized by people in general, as a junkie, or as a criminal… People judge a book by the cover a lot of times." The discrimination faced by formerly incarcerated individuals creates these invisible punishments, which ultimately serve to punish them in their social lives as well.

When discussing what helped or facilitated their reconnection with others, many participants discussed two themes: technology as facilitating relationships and sobriety as facilitating relationships. Participants spoke about how phones[6] and the Internet helped them connect both when they were incarcerated and after their incarceration. Participant 22 said that his "cell phone has been really helpful," as did many other participants. As with those

[6] In some discussions it was unclear if phones used during incarceration were landlines or cell phones; however, the many references to cell phones suggest that they are enough of a presence in prisons and jails to warrant a discussion.

who spoke of cellphones being banned in their treatment programs, men without cellphones often complained about the barriers created by not having a cell phone. Participant 37 shouted, “[I] don’t have a phone! […] That would really help.” Although cell phones are not permitted in nearly all correctional facilities in the United States, and internet access is exceptionally limited, incarcerated individuals often still find ways to use these technologies. They may use cell phones that were illegally brought into the facility or may direct family members to use social media and other websites by proxy. Participant 12 describes their prevalence and the risks individuals are willing to take to have cell phones. “Lots of people had contraband cell phones. Flip phones were 1500 dollars in prison…could buy stuff from guards too. […] Getting caught with a phone was a 90 day additional [sentence].” The prevalence of cell phones in our discussions with participants suggest that the connection that cell phones provide may be worth the risk during incarceration and essential after incarceration. Especially, as Participant 37 reminds us, that outside of prisons and jails there are now “no pay phones around either”.

Other participants discussed how the internet, specifically Facebook, has made it easier to connect with people while they were incarcerated and after incarceration. While incarcerated, some had family members who maintain their Facebook accounts and communicate with their friends. Participant 68 described the role his mother played in keeping touch with people for him and messaging people through his Facebook account. He adds, “She was like my lifeline.” Another (Participant 3) described how his son logged in to his Facebook account to let his friends in recovery know where he was. After his release Facebook continued to be an essential. He explained, “Social media is a great way to let a vast number of people know ‘I'm back.’… [I] let people know what [I’m] doing. Let's them know [I’m] not getting loaded. They see ‘This guy is sober.’" He says, "Thank god for social media." These technologies appear to serve an essential role in facilitating incarcerated and formerly incarcerated individuals’ connections with their family and friends. Access to cell phones and social media may help incarcerated individuals maintain the quality of their

relationships, reducing the “distance decay” described by Tillema et al. (2010). Although participants also reference letters and landlines, the extensive discussion of cell phones and social media provides insight into how these relatively new technologies have changed the way the incarcerated and formerly incarcerated individuals connect with those on the outside.

In addition to being described as a positive effect of incarceration, sobriety was also discussed when participants were asked about barriers and facilitators. Sobriety was seen as a facilitator to reconnection, and the lack of sobriety was seen as an ongoing barrier to connecting with one’s family. Participant 70 said, “Drug use has been a huge obstacle for me,” and Participant 49 said, “Drug addiction has had quite a barrier on communication with both my family and my friends.” These responses demonstrate the ongoing struggle that occurs in families where individuals want to support their loved ones, but are also tired of the behavior that accompanies substance use disorder. Mostly participants spoke about their sobriety as facilitating the healing of their relationships. Participant 45 said, “staying clean and sober has helped. Other times there have been barriers because [I] was drinking and doing drugs. [I] don’t go around them when [I’m] doing that.” This quote illustrates not only that family may not want to be around the participant when they are using, but that the participant may also distance themselves from the people they care about when they are using. Participant 41 described his friends’ eagerness to reconnect when they knew he was sober. “They are really happy when they see me clean and sober. They invite me over and want me to spend time with them.” The presence of this theme suggests that it is not only policy barriers, but also substance abuse, that need to be addressed before incarcerated and formerly incarcerated individuals can have supportive, meaningful relationships.

Chapter 6: Discussion

This study aimed to determine whether men reentering the community after prison experienced differences in their social networks, the support available to them, and wellbeing, as compared to men reentering the community after being incarcerated in jail. These hypotheses were based on the premise that incarceration in prison is an experience that more completely isolates the individual, both physically and psychologically, from their community, when compared with incarceration in jail. This isolation was predicted to have a more negative impact for their transition to life after incarceration.

However, no meaningful differences were found between the social networks, support, or wellbeing of men returning from prison and jail. Nor did the distance or time of this most recent incarceration predict these outcomes. There are four plausible interpretations of these unexpected findings. The first is that a single incarceration does not have a large enough impact to meaningfully change an individual's social network, support, and wellbeing. A person's life and experience is much greater than one incarceration, and, although it is a powerful experience, a single incarceration may not be enough to differentially impact longstanding networks and support. The second possible interpretation is that immediately after their release prisoners are not aware of the full impact that their incarceration has had on their relationships and themselves. They may still believe they have access to individuals and support who no longer feel the same bonds and sense of duty to the former prisoner that the former prisoner feels toward them. Similarly, a former prisoner may expect their stress levels to be low after incarceration, especially in comparison to high levels of stress during incarceration itself. Some time may pass before a former prisoner realizes the affect that their most recent incarceration has had on their network, the support available to them, and their wellbeing. Third, longer incarcerations may be more likely to have an impact than short incarcerations, and the sample used in this study includes individuals whose recent incarcerations were relatively short. The longest recent incarceration of any participant was 63 months or 5.25 years, and the mean was 18.13 months or 1.51 years. The impact of a

single long incarceration would likely be much greater than the impact of the recent incarcerations in the current sample. Finally, if differences between the networks, support, and wellbeing of men returning from jail and prison are small, the sample in this study may have been too small to detect these differences.

Although there were no meaningful significant relationships between individuals' most recent incarceration and their social networks, support, and wellbeing, participants' past incarcerations and lifetime incarceration did predict these outcomes. Conditions of previous incarcerations predicted the closeness to alters, incarceration histories of participants' alters, wellbeing, and support.

Participants who had been incarcerated in prison for a greater period of time previously had networks that included a smaller proportion of alters with whom they were moderately, very, or extremely close, and a larger proportion go alters with whom they were only slightly or not at all close. This relationship remains after controlling for age of the participants and the seriousness of their most recent crime.

The directionality of this relationship between previous incarceration and closeness with alters cannot be confirmed by this study. Incarceration in prison for longer periods may lead to the loss of network members with whom participants were close, or lacking a network of close individuals may have led to involvement in crime and long periods incarcerated in prison. If previous time spent in prison led to less close networks, mediation analyses show us that these relationships cannot be explained by prisonization or exclusion from the broader society and self-identification with prisoners. Therefore, it is not that those who are incarcerated in prison for long periods become less close with network members because they no longer identify with them or have adapted ways of thinking while incarcerated that makes it hard to interact with individuals who were never incarcerated. There are alterative possible explanations for this relationship. Closeness may have faded over time due to the physical separation or because network members were upset because of their involvement in crime. (Although analyses controlled for the serious of their most recent conviction, they

could not control for the type of crime they were involved in throughout their lifetime). These explanations are supported by qualitative responses. The implication of this finding is that those reentering after a long history of incarcerations in prison may have weaker connections tying them to society outside of prison and thus may be less invested in avoiding future incarceration.

The second finding regarding closeness is less intuitive and more difficult to interpret. Participants who spent more time incarcerated in jail previously had a larger proportion of people with whom they were very or extremely close. One possible interpretation is that those who have spent more time in jail have lost the peripheral, less close members of their network, and retained only the closer network members. But then we must ask why the same thing is not true for people who spent longer periods of time incarcerated in prison. The qualitative data from this study may again provide possible insight into this counterintuitive finding. Many participants described how they either became closer with their network members over the course of their incarceration or else seemed unsure about the impact that their incarceration had on their networks. Participants with a long history of jail incarcerations may feel close with their alters because they remained with them throughout the stress of incarceration. This combined with the physical proximity of jails may explain why time spent previously in jail predicts increased closeness, but time spent previously in prison does not.

Regarding the incarceration history of alters, the number of times a participant was incarcerated in the past, the amount of time they were incarcerated in the past, and the distance they were incarcerated in the past, were found to all predict the prevalence of other formerly incarcerated alters within their social networks. Specifically, those who are were incarcerated more times, for greater durations, and further from where they were living prior to their incarceration were more enmeshed in networks of other individuals with incarceration histories.

A qualitative analysis of the data demonstrated the complex role of alters who are or were previously involved in crime. These individuals were sometimes an essential part of the

participants' networks. Sometimes they were family members or had similar experiences to the participants, allowing them to be sympathetic and supportive. Sometimes these individuals, although formerly incarcerated, were no longer involved with crime.

Even when participants did consider the alters to be negative influences, losing them from the network could still be difficult. As the quantitative results show, formerly incarcerated people often make up a large portion of the networks of individuals with a long history of incarceration, so those who try to remove "toxic" alters from their network may find their network and support to be diminished. But continuing to associate with individuals still involved with crime puts the recently released individual at great risk for recidivism (Gendreau et al., 1996). Therefore, the role of formerly incarcerated alters is not black and white.

Again the directionality of this relationship is unknown. Past incarcerations may have led participants to develop a network where other formerly incarcerated individuals are more prevalent. Or, the prevalence of individuals with a criminal history in their networks may have led to greater criminal involvement and more incarcerations. Further analyses demonstrated that if incarceration history does lead to the development of these relationships it is not because it increases prisonization, feelings of exclusion from society, or feelings of inclusion with other prisoners. However, their history of incarceration could still have affected their networks through other means, such as by enabling the development of friendships during incarcerations that were maintained on the outside, by creating a common experience with formerly incarcerated individuals they met on the outside, or by causing network members without an incarceration history to distance themselves from the participants.

In all likelihood the relationship is reciprocal; a network of formerly incarcerated individuals leads to acquiring a substantial incarceration history, which also leads to networks having a greater presence of other formerly incarcerated individuals. A longitudinal study examining the development of social networks and criminal involvement of at-risk youth that follows them through their adulthood or additional qualitative data could help to examine this question in further detail. Future studies could also attempt to examine the complex nature of

these relationships by asking about the quality, rather than just quantity, of these relationships.

No matter the directionality, it is important for those working in reentry to know that those who have been incarcerated more times are more likely to have formerly incarcerated people in their networks, that those who have spent more time in prison are likely to have a larger proportion of their network who are formerly incarcerated, and that those incarcerated further from where they were living are likely to have more components that include formerly incarcerated individuals (to name a few of the specific relationships found). One of the most consistent findings in criminology is that socializing or identifying with others involved in crime has a large effect on recidivism (Gendreau et al., 1996). Therefore, it is prudent for probation officers, parole officers, and others invested in a former prisoner's success to be aware that those with a more substantial incarceration history may have a greater prevalence of formerly incarcerated individuals in their network and thus a greater risk of recidivism. Probation officers, parole officers, and case workers may consider providing these individuals with additional support and monitoring and consider redirecting them towards prosocial networks, including volunteer groups or Alcoholics or Narcotics Anonymous.

The counterintuitive finding that those who spent more time previously in jail experienced less stress upon release also requires discussion. The data suggest that this relationship could not be explained by prisonization or inclusion in ingroups. Another possible explanation is that individuals who have been incarcerated in jail for longer periods of time previously have had many incarcerations (as time is jail is typically short) and thus so many experiences with reentering, that they have become accustomed to it. However, there was no significant relationship between number of previous incarcerations and stress, so this explanation seems unlikely.

It is possible that this finding is due to the unique nature of the site where the data were collected—Santa Cruz County—and the criminal justice reform work being undertaken there. Since the implementation of AB109 the county and non-profit organizations in the

county have put considerable effort into improving services to those in jail both leading up to reentry and during reentry. It is possible that those who have been incarcerated in the Santa Cruz jail for more time previously, were more likely to have had access to these reentry services, making their reentry less stressful. This is also a possible explanation for why those who have spent more time in jail previously have a larger proportion of very close and extremely close network members. Perhaps the services provided in the county are bringing them closer with their friends and families on the outside.

Some of the most interesting findings of this study are the significant relationships between previous incarceration history and support available to the participants The amount of time spent in prison previously was an especially good predictor of support, as those who previously spent more time in prison had significantly smaller proportions of their network to whom they would go for emotional and instrumental support and smaller of proportion of their network who to whom they would go for at least one type of support or both types of support. These were all medium sized effects, ranging from -0.33 to -0.36, a substantial effect for psychological or criminological research.

However, these relationships were not mediated by prisonization, identifying with society outside of prison, identifying with other prisoners, or by being moderately, very, or extremely close with the individuals in their network. Other possible explanations for these relationships are that network members are less willing to provide support to people who have been incarcerated in prison for longer periods or that the participants themselves feel that they are less deserving of support if they have been incarcerated in prison for longer. Alternatively, the networks of men who previously spent more time in prison may include people who have less resources available to them and therefore have less emotional and instrumental capital to share with the person reentering. It is also possible that these individuals went to prison for longer periods because they lacked support.

No matter the reason or the directionality, the relationship between previous time spent in prison and support available may be critical to recidivism reduction. Probation

officers, parole officers, and others invested in the success of these men should be aware that those who have been incarcerated in prison for longer periods in the past are less likely to have access to individuals to whom they could turn for instrumental or emotional support. For these individuals it is especially essential to provide connections to and information about governmental and non-profit services that can help provide housing, food, jobs, and therapy. As discussed in Chapter 1, there are many reasons that support is necessary for avoiding re-involvement in crime and successfully reintegrating into the community. Therefore, it is essential that individuals who have spent many years in prison be provided with support to supplement the lack of support in their own social network. Government and non-profit entities can lead the way in providing additional support to these individuals. They can direct their clients to and assist these clients in obtaining instrumental resources, such as driver's license, housing, employment opportunities. They can also make recommendations for how seek emotional support. As suggested, individuals can be directed to volunteer groups or substance use support groups, or they can be directed to where to find effective therapy.

Up until this point in the chapter I have mostly focused on significant outcomes of previous incarcerations. Although there were also significant relationships between lifetime incarceration and the incarceration history of alters and between lifetime incarceration and support, these correlations mostly provided redundant information. Nearly all of the significant outcomes that the lifetime incarceration measures predicted could also be predicted by previous incarceration history and were not predicted by recent incarceration. This suggests that these significant outcomes of lifetime incarceration were driven by the predictive power of previous incarcerations. The one exception is the ability of lifetime incarceration distance to predict the proportion of networks that provide emotional support. The distance a participant was incarcerated throughout their lifetime, but not the distance of their previous incarceration, predicted emotional support. Those who have spent a greater amount of time previously in prisons have a significantly smaller proportion of their network that can provide emotional support.

It is also necessary to discuss the outcomes that were not significantly predicted by any measures of incarceration history. No incarceration history measures used in this study predicted network size, prevalence of family, or number of components. That network size did not vary is both surprising and unsurprising. It seems logical that people who have been on the inside for longer periods and further from their homes would have fewer people they know outside of prison. However, both duration of recent incarceration and lifetime incarceration were positively skewed, so there are fewer participants who were incarcerated for long periods. Also, the study was designed to push all participants to get as close as they could to listing 16 alters. This was done because some social network measures require ego networks to have relatively similar number of alters. However, this may have resulted in participants listing alters who they would not have otherwise included, producing less variety in their responses. Future research could separately examine network size and other social network metrics.

Additionally, the qualitative data collected support the assertion that relationships were lost due to incarceration. Those relationships were lost for many reasons, including because participants ended relationships, the relations ended the relationship, or the relationship simply fading with time. Therefore, it seems likely that relationship loss did in fact occur over the course of incarcerations, and by pushing participants to list 16 alters, this occurrence may have been obscured. Again, this could be clarified with longitudinal data.

There were also no measures of incarceration history that predicted the proportion or number of family members in a network. I believe there may be two patterns of family reaction to involvement in crime and incarceration, which together obstruct the other's effects. For some participants, incarceration and criminal involvement may drive a wedge between them and their families, while for other participants' criminal involvement may bring them closer to their families. The first instance is exemplified by respondents who described how their incarcerations and involvement in crime created physical and emotional distance with the network members and by respondents who described the emotional distress experience

by their network members. The second pattern, where incarceration and crime leads individuals to become closer with their families, may be present when family members are also involved in crime or when many of family members are associated with a specific gang. This pattern may also emerge in the networks of those who described how incarceration had a positive effect on their relationships. Those who described how the distress of incarceration or their sobriety brought them closer with their families may have networks where family members are very prevalent. If these two typologies exist, the effects of incarceration history on family presence in networks would cancel each other out, and we would see no evidence of an effect. Further research and analysis could delve deeper into this question by looking more at the criminal justice histories of network members and collecting additional qualitative data.

I also found no evidence of a relationship between incarceration history and the number of network components. When making my hypotheses I equated more components with a stronger, healthier network; however, as the literature reviewed in Chapter 2 suggests, there are both good and bad consequences of having a well-integrated network. More components mean additional parts of a network that individuals can turn to if one relationship is soured, but it can also make it harder for important information to travel across the network when network members need to know something to better support the recently released individual. It also appears that age is significantly related to the number of components. Together these suggest that the effect incarceration on components and the effect of components on support may be more complicated than originally thought, and would benefit greatly from additional qualitative research.

Finally, to improve individuals' chances of a successful reentry and reintegration, policy makers and those working with currently and formerly incarcerated individuals should note what facilitates and stymies reconnection with network members. Participants noted the importance of technology and sobriety, both of which allow them to more easily connect with the people who are important to them. The extensive references in interviews to relatively

new technologies like cell phones and social media are especially noteworthy. Incarcerated and formerly incarcerated individuals are heavily relying on these technologies to reconnect; however, they are banned during incarceration and may be banned in programs after incarceration. Policymakers and service providers would be wise to consider the importance prisoners are placing on these technologies, despite bans and prohibitions. There may be ways to allow prisoners and former prisoners to gain access to these technologies in a restricted manner, while continuing to serve the purposes of the prohibitions. For example, some federal correctional facilities have set up an email system referred to as TRULINCS, which allows prisoners to communicate with individuals on the outside, but is subject to monitoring by prison guards (Branstetter, 2015). Prisoners are already using these technologies, and will likely continue to use them illicitly if they are not incorporated into the larger system.

Participants' emphasis on the role of sobriety in reconnection also has policy implications. When individuals say incarceration allowed them to become sober and that sobriety was essential to reconnecting with people important to them, it is clear that the value of incarceration was not in its ability to punish or correct behavior, but rather as a mostly drug and alcohol-free space that provided the push individuals needed to become sober. This suggests that many of these individuals do not need to be in correctional facilities, but rather in substance abuse treatment facilities.

The two barriers to reconnection that were most discussed by participants were program and supervision restrictions and invisible punishments. Unnecessary restrictions may be placed when programs adopt one-size-fits-all models. For restrictions to best meet the reentry needs of an individual they should be implemented on a case by case basis. This is more feasible when probation officers, parole officers, and caseworkers' caseloads are smaller. Although money is often tight in the public and non-profit sectors, resources and focus should be redirected from punishment during incarceration to helping individuals both before and after release to become successful, healthy, and law-abiding.

Similarly, invisible punishments serve to continue to punish formerly incarcerated individuals long after their sentences are over. Prisoners indicate that problems obtaining employment, housing, and other necessities makes it difficult to reintegrate into society outside of prison. Again focus needs to be redirected from punishment to supporting formerly incarcerated individuals in becoming a successful member of society. Without this support from family, friends, service providers, probation officers, and parole officers, we doom formerly incarcerated men and women to a societal exclusion that may lead them back to prison and jail.

Prisonization and Inclusion of Ingroup in Self

Although the primary focus of this study was to look at the relationship between incarceration and support after reentry, it is also necessary to discuss some of the findings relating to the newly developed prisonization scale. With the current data we were able to find an underlying simple structure that utilized 12 of the original prisonization items, fitting them into three factors, which were labeled Emotional Guarding, Deserving of Regulation, and Social Withdrawal. These items were reliable as an overall measure of prisonization, and moderately reliable as subscales.

The principal axis factor analysis of the 30 original proposed prisonization items indicates some initial support for Haney's six components of prisonization (2003): hypervigilance, emotional overcontrol, diminished self-worth, exploitive worldview, social withdrawal, and dependence on institutional structure. Further data collection and analyses could help to finalize a set of reliable and valid items to measure prisonization. The current items suggest the clear emergence of factors the capture the presence of an exploitive worldview and dependence on institutional structure. It is not currently clear if hypervigilance and emotional overcontrol can be differentiated. Together these items could be combined to be referred to as Emotional Guarding. Therefore, future work on this scale must consider whether to treat these as one concept or to find a way to parse these concepts apart. If

hypervigilance and emotional overcontrol were indistinguishable it would provide evidence for a five factor model of prisonization.

Items should also be revised or added to provide a clear distinction between Diminished Self-worth and Dependence on Institutional Structure. Exploitive Worldview appears to be a distinctive category, but questions should be revised to ensure that the items load on the same factor. But the current study utilized a very small sample size, so all findings must be considered very tentative. However, the current analysis could be used to determine which items could be retained and removed when conducting a large-scale prisonization scale development study.

Although the prisonization scale and subscales developed for this study are tentative, some interesting findings still emerged in the course of examining possible mediation relationships. The incarceration history measures used in these analyses did not correlate with any of the prisonization scales, or the Inclusion of Ingroup in Self measures. This is unexpected, but does not negate the usefulness of this prisonization scale or the Inclusion of Ingroup in Self measures. Prisonization and Inclusion of Ingroup in Self may correlate with correctional history when samples include individuals who were incarcerated for much longer periods of time, or they may be correlated with incarceration history measures not examined in the mediation analyses. They may also correlate with environmental violence, security level, time spent in isolation, or mental health prior to incarceration. All of these should be examined in future prisonization scale development work.

Prisonization and Inclusion of Ingroup in Self did significantly predict a number of other outcomes. Feeling included in and identifying with people inside prison and jail significantly predicted a greater number of network members who were formerly incarcerated, while feeling included in and identifying with people outside prison and jail predicted a smaller proportion of network members who were formerly incarcerated. This suggests an important association between how these men identify and the people with whom they surround

themselves. They may seek network members who they feel similar to or they may feel included or excluded based on the network they already have.

Prisonization was found to predict the support that network members could provide. Those participants who experience high levels of prisonization in the form of social withdrawal reported less support available to them on release. They had a smaller proportion of network members who could provide emotional support, a smaller number who provided instrumental support, less total support available, and a smaller proportion who could provide both types of support. These individuals also reported much higher levels of stress upon release, as did those who experienced more prisonization overall and prisonization in the form of emotional guarding. The availability of support was also predicted by the extent to which participants identified with people inside and outside of prison and jail. However, unexpectedly, identifying more strongly with those inside or outside prison and jail predicted greater access to support. Those who identified with people inside jail and prison were more likely to have at least one type of support available to them, and those who identified with people outside of prison and jail have a greater amount of support available to them overall and had a larger proportion of network members who could provide both types of support. This suggests that availability of support may predicted not by who you identify with, but rather whether you identify with and connect with other individuals at all. The ability to connect with others may itself provide individuals returning from prison and jail with access to support.

Also noteworthy is the strong correlation between stress and identifying with people outside of jail and prison. Those participants who felt they were included in society outside of prison and jail were less likely to experience stress after their incarceration. This finding emphasizes the potential importance of ensuring that incarcerated individuals do not feel completely isolated from people on the outside. This could potentially be addressed with transitional programs during incarceration that allow prisoners to work or go to school on the outside. Together many of the findings relating to prisonization and Inclusion of Ingroup in

Self have important implications for who may be most at risk during the reentry process due lack of supports and high levels of stress. Future studies should delve more deeply into the relationships between prisonization, support, and wellbeing after incarceration.

Chapter 7: Summary and Conclusions

Support is integral for a successful reentry into the community (Berg & Huebner, 2011; Colvin et al, 2002; Petersilia, 2003). However, the present study indicates that individuals who have been incarcerated for longer in prison in the past, who have been incarcerated in any setting longer in the past, have been incarcerated in any setting longer throughout their lifetime, and/or who have been incarcerated further from home throughout their lifetime have less support available to them. Many of these measure of previous and lifetime incarceration also predicted alter closeness, incarceration history of alters, and participant wellbeing. Formerly incarcerated persons who are likely to have less support, less close network members, a greater prevalence of formerly incarcerated network members, and worse wellbeing should be identified and provided with additional reentry services by correctional facilities, probation and parole officers, and non-profit and government service providers. This may, in turn, reduce crime and increase public safety.

This research also paves the way for additional research on support during the reentry processes. Ideally, future work should include longitudinal research conducted with the assistance of corrections department. Causal relationships between incarceration history, support, stress, prisonization, and identity could be better understood if an individuals' social network was mapped immediately after they were incarcerated, at the end of their incarceration, immediately after their release, and six months after their release. Additional buy-in from government officials could help to provide a sample that better represents the incarcerated population in the United States, to ensure interviews were conducted at similar times in the incarceration and reentry process for all participants, and to obtain greater accuracy when collecting incarceration histories. Future work would also benefit from collaborations with researchers work with prisoners who were serving life (or, at least, very long) sentences. In these cases, deterioration of relationships may be more pronounced. Additional work is also needed to better understand whether formerly incarcerated individuals in networks are a positive or a negative influence during reentry.

This research also takes the first steps in developing a scale to measure the prisonization of incarcerated individuals. Future research should continue to develop and validate a scale using a large sample size of both currently and formerly incarcerated individuals.

There are many additional research questions that could be answered by analyzing the data collected during the course of this research. The data exist to examine questions of alter centrality, the qualities that define network members who provide support, factors that predict contact and visits during incarceration, and much more.

The current study has a number of limitations. As discussed previously, this study cannot determine the direction of causation of any significant findings. It also used a relatively small sample size, which provided less power to detect potential effects. Therefore, hypotheses that were not supported by this research could find supported in future studies. Also, measures of incarceration history were relatively non-normal, as would be expected with this type of data. These measures also suffered from difficulties with participant memory and recall. However, if this research was conducted in collaboration with correctional facilities data could be collected from a stratified sample, providing more normal, accurate, and precise incarceration history data.

There is also a question of the accuracy of social network recall. Social network researchers often highlight the susceptibility of participants to misremember and misreport their social networks (McCarty, Killworth, & Rennell, 2007). However, in the current study the subjective analysis of participants' own networks is most important. If they cannot recall someone when prompted to in this study, it seems unlikely that they will think to draw on them for support. Therefore, I believe the alters that participants recalled and listed provide important information about their networks.

Finally, this research was conducted in Santa Cruz County, a community with a relatively unique and progressive attitude toward criminal justice. The county has one of the lowest incarceration rates in the state and 50% fewer pretrial detainees than most jails (Crime

and Justice Institute, 2012). California prison realignment gave counties the ability to make decisions on the local level that were previously made on the state level (Santa Cruz County Probation Department, n.d.). Each county is approaching realignment in a different way, and Santa Cruz has chosen an approach that reduces time incarcerated and provides additional reentry services and supports both during and after incarceration. It is therefore difficult to generalize the results of this study to other counties.

Despite these limitations, this research has important implications for criminal justice policy. The findings can help to inform reentry practices and change incarceration conditions to allow prisoners to better maintain or rebuild their relationships while incarcerated. Cullen, Wright, and Chamlin (1999) describe how criminologists too often try to reduce crime through control, while neglecting to understand the "softer side of human relationships." They suggest that the path to criminal justice reform and crime reduction is through an understanding of social support. It is through this understanding that we can improve the wellbeing of, not only incarcerated and formerly incarcerated people, but also society as a whole.

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Appendix

Total Time Incarcerated 1 = Time in Jail + Time in Prison.

Total Time Incarcerated 2 = Time in Jail + Time in First or Only Prison + Time in Second Prison + Time in Third Prison + Time in Fourth Prison + Time in Fifth Prison + Time in Sixth Prison + Time in Seventh Prison + Time in Eighth Prison.

If returning from jail, Recent Incarceration Distance = Distance of Jail.

If returning from prison, Recent Incarceration Distance = ((Time in Jail/Total Time Incarcerated 2) x 1)) + ((Time in First or Only Prison/Total Time Incarcerated 2) x First or Only Prison Distance) + ((Time in Second Prison/Total Time Incarcerated 2) x Second Prison Distance) + ((Time in Third Prison/Total Time Incarcerated 2) x Third Prison Distance) + ((Time in Fourth Prison/Total Time Incarcerated 2) x Fourth Prison Distance) + ((Time in Fifth Prison/Total Time Incarcerated 2) x Fifth Prison Distance) + ((Time in Sixth Prison/Total Time Incarcerated 2) x Sixth Prison Distance) + ((Time in Seventh Prison/Total Time Incarcerated 2) x Seventh Prison Distance) + ((Time in Eighth Prison/Total Time Incarcerated 2) x Eighth Prison Distance).

Previous Distance Incarcerated = ((Length of First Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x First Previous Incarceration Distance) + ((Length of Second Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Second Previous Incarceration Distance) + ((Length of Third Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Third Previous Incarceration Distance) + ((Length of Fourth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Fourth Previous Incarceration Distance) + ((Length of Fifth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Fifth Previous Incarceration Distance) + ((Length of Sixth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Sixth Previous Incarceration Distance) + ((Length of Seventh Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Seventh Previous

Incarceration Distance) + ((Length of Eighth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Eighth Previous Incarceration Distance) + ((Length of Ninth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Ninth Previous Incarceration Distance) + ((Length of Tenth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Tenth Previous Incarceration Distance).

Lifetime Distance Incarcerated = ((Total Time Incarcerated 1/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Recent Incarceration Distance) + ((Length of First Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x First Previous Incarceration Distance) + ((Length of Second Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Second Previous Incarceration Distance) + ((Length of Third Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Third Previous Incarceration Distance) + ((Length of Fourth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Fourth Previous Incarceration Distance) + ((Length of Fifth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Fifth Previous Incarceration Distance) + ((Length of Sixth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Sixth Previous Incarceration Distance) + ((Length of Seventh Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Seventh Previous Incarceration Distance) + ((Length of Eighth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Eighth Previous Incarceration Distance) + ((Length of Ninth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Ninth Previous Incarceration Distance) + ((Length of Tenth Previous Incarceration/ (Total Time Incarcerated 1 + Length of All Previous Incarcerations)) x Tenth Previous Incarceration Distance).