RETHINKING PRISONIZATION: A LONGITUDINAL INVESTIGATION OF ADHERENCE TO THE CONVICT CODE ACROSS STAGES OF INCARCERATION

By

KENDRA J. CLARK

B.S., Baker University, 2014

A thesis submitted to the

Faculty of the Graduate School of the

University of Colorado Boulder in partial fulfillment

of the requirement for the degree of

Master of Arts

Department of Sociology

2018

This thesis entitled:
Rethinking Prisonization: A longitudinal investigation of adherence to the convict code across stages of incarceration
Written by Kendra J. Clark
has been approved for the Department of Sociology

_____
Dr. David Pyrooz

_____
Dr. Michael Radelet

_____

Dr. Jason Boardman

Date_____

The final copy of this thesis has been examined by the signatories, and we find that both the content and the form meet acceptable presentation standards of scholarly work in the above-mentioned discipline.

IRB protocol # 16-0109

Clark, Kendra J. (M.A., Department of Sociology)

Rethinking Prisonization: A longitudinal investigation of adherence to the convict code across stages of incarceration

Thesis directed by Assistant Professor David C. Pyrooz

Prisonization indicates the degree which an individual adheres to the prison subculture, also known as the convict code. The convict code can be characterized using three domains: criminal identify and beliefs, antisocial group cohesion, and opposition toward the criminal justice system. Strong convict code adherence has been linked to multiple antisocial outcomes. Therefore, understanding how adherence to the convict code persists across time and location will allow criminologists and social scientists to better understand the consequences of incarceration on the release experience. The current study uses a sample of 1,035 people and 7,768 person-periods from the Pathways to Desistance Study and fixed-effect models to investigate patterns of within-person adherence to the convict code, operationalized as moral disengagement, association to antisocial peers, and perceived legitimacy of the criminal justice system, across multiple stints of incarceration. This analysis will test three theories—the deprivation and importation models, and a new theory I present called the durability model which addresses how adherence to the code may be expected to persist during release. Results from fixed-effect models and post hoc analyses show three main findings. First, a person's adherence to the code is never expected to decrease during an incarceration period. Second, adherence to the code rarely changes during release periods relative to corresponding incarceration periods. And third, trends of code adherence across location show considerable support for the durability model. Programming implications are discussed.

ACKNOWLEDGEMENTS

First and foremost, I want to thank my husband, Levi, who as I write this is completing his third load of laundry for the day while simultaneously washing all the dishes I've dirtied this weekend. To say he keeps me going would be an understatement. His patience and support has kept me grounded and fosters my ability to progress each day—even when my progress may hinder his own. For this I say, "thank you, I appreciate you more than you know, and hold on because the 'fun' isn't over yet." Next, I cannot imagine making it through my graduate school career without my thesis chair, Dr. David Pyrooz, whose unconditional support, encouragement, and mentorship always proves to be just what I need to keep moving forward—no matter how slowly my pace may be. It is insufficient to try and show my gratitude to him in a few sentences after all he has done for me. I simply would not be where I am today without him.

In addition to David, I want to thank Dr. Michael Radelet and Dr. Jason Boardman for each of their mentorship and guidance throughout my graduate career thus far and for serving on my committee. Their review of my work undoubtedly makes it better, just as their oversight on my career has made it better. I also want to thank Dr. Ryan Masters for his insight on my models and general support in my times of doubt. Lastly, I want to thank my parents and my brother who always know exactly what to say to keep my head in the game, despite their limited knowledge about the game itself. Their reassurance and admiration toward my education and research never go unnoticed (and neither do their reservations about me going into prisons to do research—despite their attempts to bite their tongues). Even in my weakest times, they ensure I know I make them proud.

This thesis is based on work supported by the National Science Foundation Graduate Research Fellowship Program. Any opinions, findings, and conclusions or recommendations

expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

CONTENTS

TABLES

Table

FIGURES

Figures

Culture has been described as a mechanism for which 'strategies of action' are constructed providing members with a 'tool kit' to assist them in decision making (Hannerz, 1969; Swidler, 1986). Social scientists have long discussed the influence culture has on individual and group behaviors. For this reason, criminologists have shown considerable interest in the culture that exists among 'the society of captives' in jails and prisons and the adaptations an individual makes as they begin to adhere to this subculture (Sykes, 1958; Sykes and Messinger, 1960). Clemmer (1940) developed the concept of prisonization which refers to an individual's level of socialization into the prison subculture—a subculture since termed the convict code (Irwin and Cressey 1962). The convict code is typically characterized by features such as social role adaptation, inmate solidarity, and manipulation of staff and those who adhere strongly to the code are said to be highly prisonized (Clemmer, 1940; Irwin and Cressey, 1962; Sykes and Messinger, 1960). Adherence to the convict code has been discussed in association with decreased institutional control (Thomas et al., 1981) and decreased success in reentry (Irwin and Cressey, 1962; Thomas et al., 1981; Zingraff, 1975) suggesting code adherence may lead to antisocial behavioral outcomes.

Two competing theories concerning the origins and maintenance of the convict exist. The importation (Irwin and Cressey, 1962) and deprivation (Sykes and Messinger, 1960) models debate whether the influences of the convict code are exogenous or endogenous to the incarcerated experience, respectively. Although both have been partially supported empirically (Akers, Hayner, and Gruninger, 1977; Paterline and Peterson, 1999; Thomas, 1973), it is the general consensus that some combination of these two models is the best approach to understanding the subculture (Camp et al., 2003; Kreager and Kruttschnitt, 2017; Thomas, 1977). Thomas, Petersen, and Zingraff (1978:390) made the early predication that "[a]ny who

wish to continue a debate over whether responses to confinement are a product of either the immediate problems of confinement or influences far removed from the prison setting are debating a dead issue." Therefore, I propose a third theory of prisonization called the durability model which combines elements from both traditional models while focusing on how code adherence should be expected to change across the life-course. The durability model argues an individual's adherence to the convict code will increase with each added exposure to the criminal justice system and persist after release due to his or her resistance to reintegration programming the system offers upon release.

In the era of mass incarceration, issues surrounding the populations cycling through incarcerated settings are at the forefront of criminological interest. However, empirical research has struggled to keep up with changes among these two populations due to the limited opportunities for research in jails and prisons throughout the 80s and 90s. These limitations were due to the fall of the rehabilitative ideal (Feeley and Simon 1992; Martinson 1974), the increased focus on managerial professionalization and bureaucratization within prisons (Crouch and Marquart 1989; DiIulio 1990; Hepburn 1985; Riveland 1999), and difficulties satisfying university institutional review boards for human subjects research in jails and prisons (Kreager and Kruttschnitt 2017). Although a few studies have investigated code adherence longitudinally (Alpert, 1979; Walters, 2003), past research has not investigated how adherence to the convict code varies as an individual moves into and out of incarcerated settings. This gap hinders the ability to understand how incarceration may influence a person's adherence to the convict code in the era of mass incarceration.

Fortunately, jail and prison research has seen a revival since the turn of the century with multiple studies getting access to conduct research within incarcerated settings, some of which

have been able to do so longitudinally (Lattimore and Visher, 2010; Mitchell et al., 2018; Mulvey, 2012; Western, Braga, and Kohl, 2017). Since this revival, researchers have been able to investigate the collateral consequences of incarceration on various outcomes, such as criminal capital, marriage, and gang membership (Huebner, 2007; Nguyen et al,. 2017; Pyrooz, Gartner, and Smith, 2017). Since gang culture and prison culture are known to be intricately related (Mitchell et al. 2017), understanding the relationship between gang membership and incarceration provide important insight to the current study. Pyrooz, Gartner, and Smith (2017) found that individual-level gang membership was more likely during and after incarceration. These findings help motivate the formation of the durability model and informs predictions for how adherence to the convict code may vary across location.

Using data from the Pathways to Desistance study, I present the first longitudinal investigation of convict code adherence across multiple stints of incarceration. Similar to past studies examining within-individual effects of incarceration (Nguyen et al., 2017; Pyrooz, Gartner, et al., 2017), I use fixed-effect modeling to investigate three questions: 1) Does within-person adherence to the convict code differ during incarceration periods relative to preceding periods on the street? 2) Does within-individual adherence to the convict code differ during release periods relative to preceding incarceration periods? And 3) Which of the three theoretical models do patterns of convict code adherence most closely conform? Investigating within-individual change in code adherence across location rather than between-individual changes allows for a more rigorous examination of the influence of setting on culture. Motivated by past research, the convict code will be measured using three different constructs—moral disengagement, association with antisocial peers, and perceived legitimacy—which operationalize the three domains of the code—criminal identity and beliefs, antisocial group

cohesion, and opposition toward the criminal justice system (Alpert, 1979; Bukstel, 1980; Faine, 1973; Thomas, 1973; Walters, 2003; Wheeler, 1961; Zingraff, 1975). When considering how code adherence may change across incarceration stage, there are three likely outcomes. First, in line with the deprivation model, prison could cause individual-level adherence to the convict code to increase during periods of incarceration and return to pre-incarceration levels during periods of release after the 'pains of imprisonment' are no longer present. Second, incarceration could have no effect and code adherence may not change across settings, as predicted by the importation model. Third, and as predicted by the durability model presented in this paper, incarceration could cause individual-level adherence to the code to increase during periods of incarceration and remain high during subsequent release periods.

PRISONIZATION AND THE CONVICT CODE

Clemmer (1940: 270) coined the term "prisonization" and defined it as the degree to which incarcerated persons accept the "folkways, mores, customs, and general culture of the penitentiary." As a person enters a jail or prison and becomes more immersed in the subculture that has developed within the walls, they are said to have become more prisonized. In his research, Clemmer emphasized the importance of human interaction in developing and transmitting culture within and across people. Although jails and prisons are total institutions where incarcerated individuals endure the 'pains of imprisonment' (Goffman, 1961; Sykes and Messinger, 1960), aspects of the neighborhoods and communities from which prisoners are removed are expected to be present in the prison subculture (Irwin and Cressey 1962). Individuals are transmitters of culture across time and space which explains how the various features of the convict code are present in prisons nationwide and persist over time with little variability (Clemmer, 1940).

Prisonization and the convict code have gained a fair amount of attention in criminological research allowing for board conclusions about prisonization as both a predictor and an outcome. As a predictor, researchers have found levels of prisonization influence outcomes such as prison bullying (South and Wood, 2006) and motivation for carrying a gun in prison (Stretesky et al., 2007). Others have worked toward modeling the convict code as an outcome to gain a clearer understanding of the factors that influence an individual's likelihood of adhering to the prison subculture (Mitchell 2018).

CONCEPTUALIZATION AND OPERATIONALIZATION OF THE CONVICT CODE

Based on Clemmer's definition, researchers have worked to conceptualize the convict code in ways that appropriately reflect the prison subculture and allow for logical operationalization of the construct. Conceptually, factors that show up consistently as key features of the prison subculture are social role adaptation, inmate solidarity, and manipulation of staff (Clemmer, 1940; Irwin and Cressey, 1962; Sykes and Messinger, 1960). Sykes and Messinger (1960) specified a list of five core features of the convict code which included: 'do not interfere with inmate interests', 'do not lose your head', 'do not exploit inmates', 'do not weaken', and 'do not be a sucker.' Although studies have operationalized the convict code in different ways, each of them tap three major domains: criminal identity and beliefs, antisocial group cohesion, and opposition toward the criminal justice system.

Criminal Identity and Beliefs

Consistent with labeling and differential association theory, one of the key aspects of the code and an indication of high levels of prisonization is an individual's perceived criminal identity, social role, and adoption of criminal beliefs (Goffman, 1961; Sykes and Messinger, 1960; Trammell, 2009). As incarceration time increases, research has shown jails and prisons can

serve as schools of crime where individuals gain criminal capital and solidify beliefs favorable to crime (Nguyen et al., 2017). As a person accepts his or her criminal identity and aligns with criminal values and beliefs, that person becomes more prisonized. Goffman (1961) described this conversion of identity as part of the 'standardized defacement' that occurs when a person enters a total institution. Upon entering the institution, any other identity the individual possesses is stripped away and his or her identity as a criminal becomes primary. Sykes and Messinger (1960: 9) found that the social role one fills within the jail or prison (e.g. 'rat', 'wolf', 'gorilla', 'right guy', etc.) is a strong predictor of adherence to the code because "conformity to, or deviation from, the inmate code is the major basis for classifying and describing the social relations of prisoners" and adopting a social role indicates conformity to the code.

When operationalizing this domain, studies use measures of prison role adaptation (Garabedian, 1963; Schrag, 1944; Sykes and Messinger, 1960; Thomas and Foster, 1972), identification with delinquent attitudes (Bukstel, 1980), and criminal self-identification (Thomas, Peterson, and Cage, 1981). Each of these measure the degree to which an individual has begun to identify more strongly with a criminal identity and beliefs than prosocial ones. When tested empirically, studies have consistently found that adherence to the code is higher among those who maintain criminal identities (Faine, 1973; Thomas and Foster, 1972; Walters, 2003). These outcomes suggests that criminal identity and beliefs should increase when a person is incarcerated (Faine, 1973; Walters, 2003).

Antisocial Group Cohesion

The second domain of the convict code is antisocial group cohesion. The utilitarian nature of the prison subculture emphasizes the importance of "group cohesion and inmate solidarity" (Clemmer, 1940; Goffman, 1961; Irwin and Cressey, 1962; Sykes and Messinger,

1960: 11). In agreement with learning and control theories, as individuals become more bonded to those with antisocial attitudes and beliefs, they lose contact and bonds with prosocial society. Criminal and gang embeddedness research has shown that as embeddedness into antisocial networks increase, individuals are more isolated and restricted from prosocial society and legitimate opportunities (Hagan, 1993; Pyrooz, Sweeten, and Piquero, 2013). As they gain antisocial and lose prosocial contacts they begin to learn and internalize criminal values and become increasingly committed to their antisocial group. This in turn increases their adherence to the convict code.

Studies have operationalized this domain by using constructs of strategic survival (Mitchell, 2018), value of inmate relationships (Bukstel, 1980; Zingraff, 1975), and external communication with caring family and friends (Lawson et al., 1996). Empirical evidence has shown that as the value and priority placed on inmate relationship increase, so does adherence to the convict code (Thomas and Foster, 1972; Zingraff, 1980). Others have found a positive (Lawson et al., 1996), null (White, 1981), or negative (Alpert, 1979; Thomas, 1973) relationship between contact with caring individuals in the free world and convict code adherence. Although the empirical evidence presented here is inconclusive, conceptualization of this domain would expect a positive relationship between adherence and antisocial group cohesion.

Opposition Toward the Criminal Justice System

The last domain measures rejection of institutional norms and manipulative relationships with institutional staff (Clemmer, 1940; Goffman, 1961; Irwin, 1980; Irwin and Cressey, 1962; Sykes and Messinger, 1960). According to Sykes and Messinger (1960:11), one of the defining features of the convict code is that members are “united firmly in their opposition to the enemy out-group.” With the other primary feature of the code emphasizing the importance of inmate

group cohesion, researchers have established that one cannot be committed to the best interests of both incarcerated persons and prison officials. So, those who are most prisonized are dedicated to inmate solidarity and opposed to the system. Tyler (1990) suggested that next to morality, perceived legitimacy of the system is one of the most important factors in determining compliance to the laws, rules, and norms of an institution. One of the greatest indications that an individual has become highly prisonized is his or her rejection of the norms and values commonly held by the people and institutions that make up the criminal justice system.

When operationalizing this domain, studies use constructs like manipulation of prison staff (Thomas, 1973, 1977; Thomas et al., 1981), rejection of values prescribe by prison authority (Akers et al., 1977; Alpert, 1979; Bukstel, 1980; Ramirez, 1984; Thomas et al., 1981; Wheeler, 1961), and negative attitudes toward legal systems/staff/programs/institutions (Bukstel, 1980; Thomas et al., 1981). Multiple studies have shown that as opposition toward the justice system increases, adherence to the code also increases (Alpert et al., 1977; Thomas and Foster, 1972; Wheeler, 1961; Zingraff, 1975).

Despite variation in operationalization, research suggests these three domains matter when investigating prisonization. Increased criminal identity and beliefs, antisocial group cohesion, and opposition toward the criminal justice system all indicate higher conformity to the convict code. With this conceptualization, the current study aims to test three theoretical models.

THEORETICAL FRAMEWORK

DEPRIVATION MODEL: RISE OF THE CONTEMPORARY PRISON

The deprivation model explains prisonization as an individual's adaptation to the 'pains of imprisonment' (Sykes, 1958; Sykes and Messinger, 1960). For Sykes and other functionalist theorists, the deprivations an individual endures as part of the prison experience fosters the

formation of the convict code. In this way, adhering to the code is protective because "as a population of prisoners moves in the direction of solidarity, as demanded by the inmate code, the pains of imprisonment become less severe" (Sykes and Messinger, 1960:16). The deprivations Sykes and Messinger (1960) recognize as being unique to the incarceration experience include social rejection, material deprivation, sexual frustration, loss of autonomy, and loss of personal security. While incarcerated, different people will adopt different roles in the prison hierarchy, all of which conform to the prison subculture to varying degrees (Goffman, 1961; Sykes and Messinger, 1960). According to the deprivation model, factors endogenous to the prison experience encourage incarcerated persons to alter their attitudes and beliefs in ways that are conducive to the prison subculture to make the most of their prison experience. When thinking about how the era of mass incarceration has influenced the prison subculture and prisonization, it is necessary to consider how incarcerated individuals' felt deprivations may have changed in response to transformations in incarcerated settings (Kreager and Kruttschnitt, 2018).

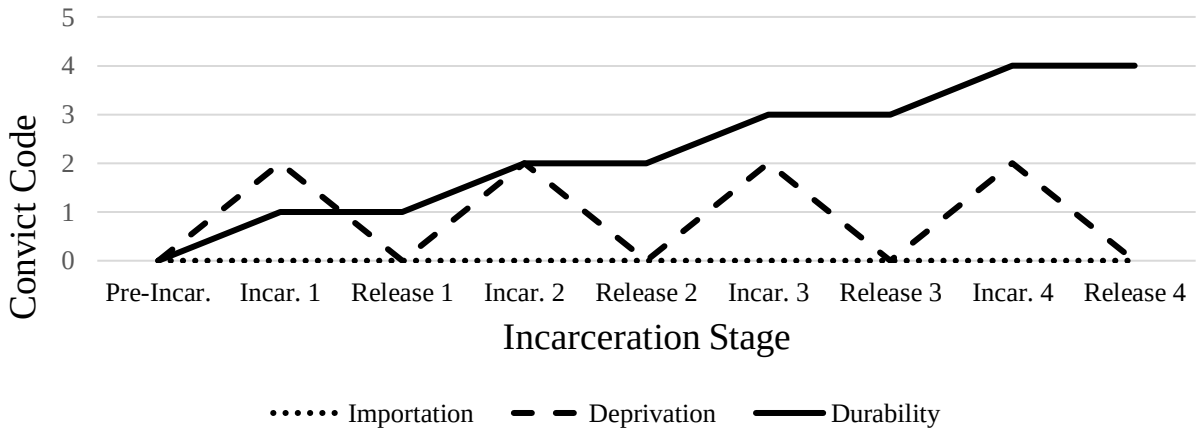
The era of mass incarceration brought compositional changes to U.S. correctional institutions which eventually lead to structural, social, and cultural changes within these facilities. These changes include overcrowding (Carson, 2014; Mumola and Beck, 1997), increased racial heterogeneity (Carson and Anderson, 2016), an aging population due to longer sentences (Carson and Sabol, 2016), replacement of rehabilitative ideals with professional, bureaucratic ideals (Feeley and Simon, 1992), increased proportion of drug convictions (Clear and Frost, 2015), and increased rates of female incarceration (Carson and Anderson, 2016; Kreager and Kruttschnitt, 2018; National Research Council, 2014). It was impossible to anticipate the collateral consequences that would occur in response to the changing population and reactive policies during this era (National Research Council, 2014; Wakefield and Uggen,

2010). If prisoners during the era of mass incarceration continue to face deprivations beyond those experienced on the street, and adherence to the convict code peaks during incarceration periods and decreases during release periods, then the deprivation model may best predict patterns of code adherence across location (see figure 1).

IMPORTATION MODEL: FROM THE GHETTO TO THE HYPERGHETTO

Dissatisfied with the limited scope of the prison-endogenous approach of the deprivation model, researchers developed the importation model which emphasizes the importance of the value and belief systems individuals bring into jails and prisons from the street (Delisi et al., 2011; Irwin, 1980; Irwin and Cressey, 1962; Jacobs, 1977). Although Irwin and Cressey (1962) do not disagree with the notion that the prison subculture formed as a defense mechanism for the 'pains of imprisonment', they do disagree with the idea that the subculture was formed exclusively within the walls of confinement. Assuming an individual does not simply leave behind his or her attitudes and beliefs upon becoming incarcerated, the importation model argues the subculture which exists in jails and prisons is merely a reflection of the subculture on the streets from which the individual was removed. Therefore, the prison subculture is merely the *maintenance* of a criminal subculture that flourishes whenever humans are confined, not the *origin*. The prison subculture only exists to the extent that belief systems exogenous to incarceration settings are imported into and assimilated throughout the institution. Importation arguments would suggest that any changes in the prison subculture in response to the changing composition of the jail and prison populations would be dependent on incarcerated individuals' resiliency to the incarcerated setting as a result of prior experiences on the street (Kreager and Kruttschnitt, 2018).

Figure 1. Theoretical Predictions of Convict Code Adherence across Incarceration Stages



Along with changes within incarcerated settings due to mass incarceration, the last quarter of the twentieth century saw cultural and social shifts in American ghettos (Massey and Denton, 1993; Wacquant, 2001). The harsh conditions traditionally known to exist in ghettos were amplified in ways that "tended to 'prisonize' the ghetto and to 'ghettoize' the prison" (Wacquant, 2001:103) making the two more similar to one another. Class segregation within ghettos, deindustrialization, increasing presence of state institutions in impoverished neighborhoods, and loss of community trust are said to have transformed the traditional ghetto into what Wacquant (2001) terms the "hyperghetto" (Massey and Denton, 1993; Miller, 1996).[1] Conditions on the street were said to have gotten so similar to those in jails and prisons that residents felt their children were being conditioned for a smooth transition into prison (Miller, 1996). If incarcerated and street contexts have truly merged to the degree described by Wacquant (2001), and if individuals who go to jail and prison are immune to the deprivations of incarceration because they have been residing in neighborhoods with the same deprivations

[1] Massey and Denton (1993) recognize these changes within American ghettos influence African American's far more severely than other racial and ethnic groups. Although it is beyond the scope of this study, racial differences in prisonization across location may be expected.

(Goffman, 1961), then adherence to the code would not be expected to change across location (see figure 1). If this is the case, the importation model may be most applicable to prisonization in the era of mass incarceration.

Numerous studies have tested the validity of these two theoretical approaches, finding empirical support for both the deprivation model (Akers et al., 1977; Reisig and Lee, 2000) and the importation model (Alpert, 1979; Alpert et al., 1977; Bukstel, 1980; Thomas, 1973; Thomas and Foster, 1972). However, multiple studies have concluded stating the two theoretical models work better in conjunction with one another than they do independently (Camp et al., 2003; Lawson, Segrin, and Ward, 1996; Mathiesen, 1965; Paterline and Peterson, 1999; Rhodes, 1979; Steiner and Wooldredge, 2009). Like most things in the social world, individual adherence to the convict code cannot be categorized within a dichotomy. Furthermore, neither of these theories focus on how adherence may vary upon release from an incarcerated setting.

DURABILITY MODEL: FROM THE STREET TO THE PRISON AND BACK AGAIN

To properly address within-individual code adherence across stints of incarceration, one must consider both incarceration and release periods. In addition to the patterns predicted by the deprivation and importation models (see figure 1), it is also possible that adherence to the code will increase during incarceration and remain at these increased levels during release periods. Since the conception of research on prisonization and the convict code, researchers have predicted that adhering to the prison subculture will likely "so disrupt the prisoner's personality that having a happy adjustment in any community afterward [will become] next to impossible" (Clemmer, 1940:300). Likewise, Irwin and Cressey (1962) predicted that those who are most highly prisonized upon release would be the most likely to recidivate in the future. Therefore, it is likely adherence to the code could persist beyond periods of imprisonment.

I propose a third theoretical model—the durability model. In response to Thomas et al.'s (1978) urge to move away from the importation/deprivation dichotomy, this model focuses less on the mechanisms which form the prison subculture and more on how adherence to it may be expected to persist over time. Clemmer (1940) posits that humans are the transmitters of culture. Therefore, although culture may originate in a given location, it is expected to persist even after a person leaves that location (Swidler, 1986; Thomas and Znaniecki, 1918). The durability model posits that each added exposure to the criminal justice system—whether through arrest, conviction, or incarceration—will increase code adherence. Then, individuals' opposition to the system influences their openness to reentry and rehabilitative programming which causes adherence to the code to persist during release periods. While factors exogenous to incarceration may differentially predict levels of prisonization (Irwin and Cressey, 1962), prisoners are still expected to make some adaptations to deal with the deprivations of prison outlined by Sykes and Messinger (1960). Upon release, a prisonized person will reject reentry programming and reenter society still in tune with the antisocial prison subculture. Therefore, those who are most prisonized are expected to have the least successful reintegration experience (Thomas et al., 1981). As Goffman (1961) found, although it is the goal of total institutions to rehabilitate, this goal is seldom reached. According to the durability theory, this failure of rehabilitation is less about a lack of programming and more about the inability of programming to reach incarcerated individuals because of their opposition to the system. When considering both classical and contemporary incarceration research, I expect the durability model to best predict patterns of code adherence across incarceration stages.

METHODS

Using data from the Pathways to Desistance study, the current study investigates changes in individual-level adherence to the convict code across incarceration stages. By examining variation in adherence across the life-course—before, during, and after a salient life event—this study aims to answer three questions: 1) Does within-person adherence to the convict code differ during incarceration periods relative to preceding periods on the street? 2) Does within-individual adherence to the convict code differ during release periods relative to preceding incarceration periods? And 3) Which of the three theoretical models do patterns of convict code adherence most closely conform? The process of prisonization is well established in criminological literature (Clemmer, 1940; Irwin, 1970; Irwin and Cressey, 1962b; Jacobs, 1977; Sykes, 1958; Sykes and Messinger, 1960). However, research has yet to explore how adherence to the convict code varies as individual moves into and out of incarcerated settings. Although it has been said that the effects of prisonization are likely long-term and may influence the reentry process (Clemmer, 1940; Thomas et al., 1981), research has not confirmed this empirically.

DATA

The Pathways to Desistance study provides longitudinal data for 1,354 adjudicated guilty adolescents from Philadelphia, PA and Phoenix, AZ and follows them for seven years into adulthood (Schubert et al., 2004). Participants of this study were recruited between November 2000 and January 2003 and had been convicted of a serious felony offense, a misdemeanor weapon offense, or a misdemeanor sexual assault when they were between 14 and 17 years old (Schubert et al., 2004).[2]

[2] During the recruitment process, the research team recognized that a high proportion of crimes committed by this age group were drug offenses – especially among the males. In order to ensure that drug crimes were not overrepresented in the sample, the proportion of males who had been convicted of a drug offense was capped at 15% of the total sample (Schubert et al., 2004).

The current study uses three sources of data which are nested within the Pathways study. First, the baseline and all follow-up interviews are utilized. This data contains the outcome variables for this study and includes 11 potential periods of observation for each respondent. Follow-up interviews had an average response rate of 89.5% throughout the seven years of follow-up data collection. The second source of data is life calendar data which includes monthly indicators of residence for each respondent during the study period which allows me to identify which waves a respondent was incarcerated. The third source of data is official arrest history data which provides information on each respondents' arrests history prior to the study, and each subsequent arrest that occurred throughout the follow-up period. This data will be used to control for past criminal behavior.

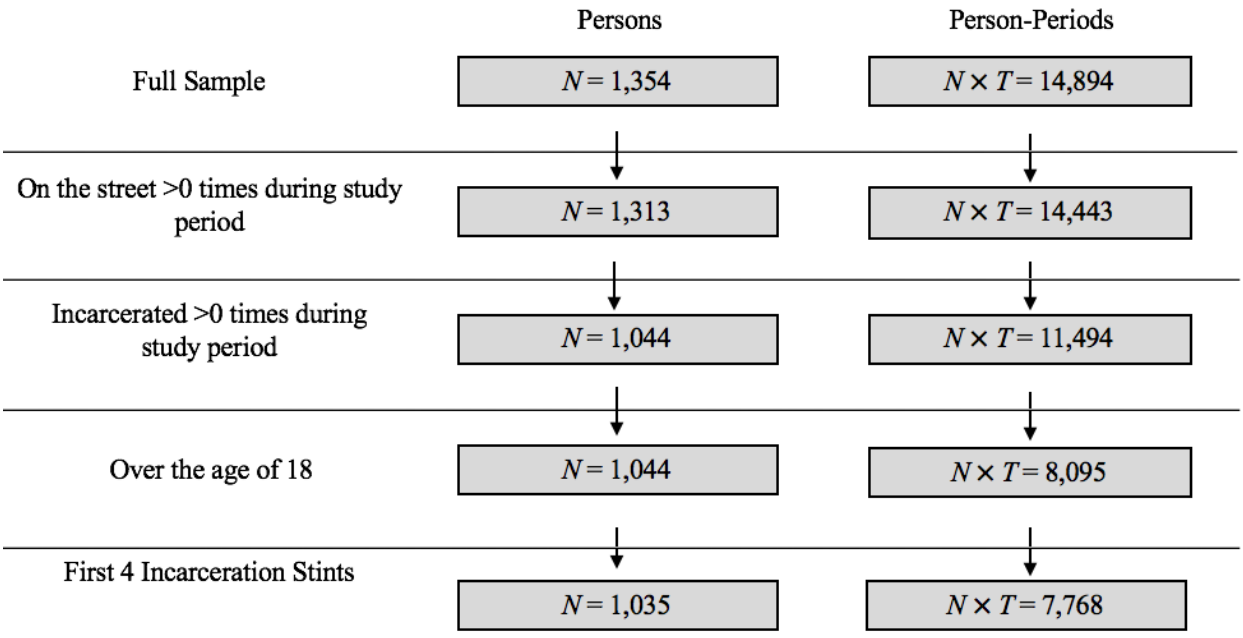
Pathways dataset is most appropriate for this study for multiple reasons. First, the multi-wave design of the data will allow for longitudinal, within-person investigation of variation in code adherence using fixed-effect modeling to control for time-invariant selection effects. These data have been used before to test the consequences of incarceration longitudinally and proven to be useful for producing novel theoretical and empirical findings (Nguyen et al., 2017; Pyrooz, Gartner, et al., 2017). Second, it includes measures that allow for operationalization of the three convict code domains. Third, this data offers an adequate sample size of a high-risk population who frequently enter incarcerated settings. This population is rarely available in large datasets.

SAMPLE

The sample selection process for the current study is illustrated in figure 2. The fixed-effect design requires everyone in the sample to have experienced at least one transition between the street and prison context during the study period. Therefore, 310 respondents were dropped because he or she was incarcerated throughout the entire duration of the study or never

incarcerated during the study. Next, because this study is particularly interested in *jail* and *prison* incarceration, as described by Clemmer (1940) as the populations subjected to prisonization, 3,399 observations were dropped where respondents were younger than 18 years old.[3] Finally, an additional nine people and 327 person-periods were dropped because they were observed during a person's fifth, sixth, or seventh incarceration. Since most incarceration experiences were within the first four stints of incarceration, the later incarcerations had sample sizes that were too small to ensure meaningful analysis. This resulted in a final sample size of 1,035 individuals with 7,768 person-periods.

Figure 2. Sample Selection Flowchart



MEASURES

Table 1 describes each of the measures used in this study. The outcome of interest in this study is adherence to the convict code. As discussed above, the convict code can be

[3] Respondents younger than 18 likely would have been incarcerated in juvenile detention centers.

conceptualized using three domains—criminal identity and beliefs, antisocial group cohesion, and opposition toward the criminal justice system. To operationalize the first domain, criminal identity and beliefs, I use a construct of moral disengagement which is collected at the baseline and each consecutive follow-up wave in the Pathways data. It measures an individual's attitudes and morality concerning the treatment of others (Bandura et al., 1996). The moral disengagement construct measures many of the attitudes and beliefs often associated with the convict code including justification of criminal behavior, respect, and loyalty (Bukstel, 1980; Faine, 1973; Reisig and Lee, 2000; Thomas, 1973; Walters, 2003). The construct reports a person's average response across 32 items measuring his or her beliefs about various situations. Moral disengagement is a continuous measure ranging from 1 to 3. It has a mean of 1.459, standard deviation of 0.350, and an intraclass correlation coefficient (ICC) of 0.352 within this sample. This construct had good internal validity with an alpha of 0.88 or higher across all waves. A high moral disengagement score represents a high level of convict code adherence.

Table 1. Descriptive Statistics for Person-Periods

	Mean/Proportion	*SD*	Min	Max
Moral Disengagement	1.459	0.350	1	3
Antisocial Peers	1.773	0.770	1	5
Legitimacy	2.290	0.585	1	4
Incarceration (pooled)	36.02%		0	1
Current Gang	8.01%		0	1
Prior Arrests	5.018	3.171	1	26
Incarceration Years	1.561	1.405	0	7

NOTES: $N = 1{,}035$, $N \times T = 7{,}768$. Coefficients interpreted as mean/proportion across person-periods.

Antisocial group cohesion will be operationalized using a measure of association with antisocial peers, which is collected at the baseline interview and each follow-up interview (Thornberry et al., 1994). This is a measure of the proportion of the respondent's friends (e.g. none of them, very few of them, some of them, most of them, or all of them) who engage in the

12 antisocial behaviors specified by the study. Within this sample, the antisocial peers scale ranges from 1 to 5 with an average of 1.773, standard deviation of 0.770, and ICC of 0.299. The antisocial peers construct had good internal validity with an alpha of 0.87 or higher across all waves. Assumptions and findings of both embeddedness and social network research suggests that higher association with antisocial groups results in decreased contacts and opportunities within prosocial society (Granovetter, 1973; Hagan, 1993; Pyrooz et al., 2013). Therefore, a higher score on this measure indicates stronger adherence to the convict code.

Finally, opposition toward the criminal justice system will be operationalized using a construct of the respondents' perceived legitimacy of the criminal justice system (Tyler and Huo, 2002). Recorded at baseline and each follow-up, this construct reports the average of 11 items measuring a respondent's trust in the justice system, respect toward the system, and ideas about the role the justice system should play. The measure ranges from 1 to 4 with a mean of 2.290, standard deviation of 0.585, and ICC of 0.358 within this sample. The legitimacy construct had good internal validity with an alpha of 0.88 or higher across all waves. The lower the individual's legitimacy score, the stronger his or her convict code adherence.

The two main predictors in the current study are a person's pooled and disaggregated incarceration effect. The pooled incarceration effect variable is a dummy indicator of whether the individual was incarcerated at the time of each observation. The disaggregated incarceration effect variable is a categorical variable that indicates an individual's incarceration stage at any given time. For this variable, 0 indicates pre-incarceration waves[4], 1 indicates the person's first incarceration, 2 indicates the person's release waves following his or her first incarceration, 3

[4] A pre-incarceration wave is an observation of an individual prior to him or her even being incarcerated.

indicates the persons second incarceration period, and so on. These two predictors will be used in separate models to investigate the three theoretical models presented in this paper. Although deprivation and importation can be tested using the pooled incarceration indicator alone, the durability model requires investigation across incarceration stage using the disaggregated incarceration variable since it predicts an additive effect of each incarceration on code adherence. Participants in the sample are included for up to four stints of incarceration.[5] Table 1 and 2 provide more detailed descriptive statistics about each of these measures. In total, the sample spent just over 36% of person-periods incarcerated. About 13% of the sample was observed prior to their first prison experience, about 35% were observed during their first prison period, over 38% experienced a second incarceration, about 27% were observed for a third prison stay, and about 12% of the sample experienced four incarcerations.

Control variables for the current study include linear (*Year--linear*) and quadratic (*Year--quadratic*) time trends that are grand mean centered, an indicator of self-reported current gang status (*Current gang member*), a count of the number of arrests the individual has had prior to any given observation (*Prior arrests*), and a count of the total number of years a person has been incarcerated during the study period (*Incarceration years*). Each of these variables vary within-person over time. There are no person-level covariates because the fixed effect model design differences out time-stable measures that do not vary.

ANALYSIS AND MODEL SPECIFICATION

This study seeks to understand the effect incarceration has on a person's antisocial attitudes and beliefs above and beyond those that would be expected for an individual who is involved in a criminal lifestyle. One way to address this question would be to compare criminally

[5] One stint of incarceration includes an incarceration period and the following release period.

Table 2. Descriptive Statistics across Stages of Incarceration

	Pre-Incar.	Incar. 1	Release 1	Incar. 2	Release 2	Incar. 3	Release 3	Incar. 4	Release 4
People									
N	138	365	648	397	409	275	226	180	123
%	13.3	35.23	62.6	38.4	39.5	26.6	21.8	17.4	11.9
Person-Periods									
$N \times T$	465	1,002	2,749	945	1,102	534	439	317	215
%	6.0	12.9	35.4	12.2	14.2	6.9	5.7	4.1	2.8

NOTES: $N = 1{,}035$, $N \times T = 7{,}768$. People presents the number/percent of people experiencing each incarceration stage. Person-Periods presents the number/percent of person-periods recorded in each incarceration stage.
ABBREVIATIONS: Pre-Incar = Pre-incarceration; Incar. = Incarceration

involved individuals who are and are not incarcerated, while controlling for observable differences between the two groups. However, the Pathways data set, like any data set, has a limited number of potential control measures leaving unobservable differences unaccounted for in the analysis. Therefore, I use fixed-effect modeling techniques that will control for both observed and unobserved preexisting characteristics and allows for correlation between the person-specific error component and predictor variables.

The fixed-effect approach models the person-specific component using a dummy variable for each individual in the sample.[6] These dummy variables allow each person's intercept to shift up or down according to his or her time-stable characteristics, ultimately removing between-person variation (Gordon et al., 2004). Therefore, a fixed-effect design renders it unnecessary to model individual-level, time-invariant characteristics (e.g. race, gender, location, genetic characteristics, pre-baseline experiences, etc.) because these models do not seek to explain between-person variability. Although unobserved time-stable characteristics are adjusted for, unobserved time-varying characteristics are not. Therefore, the covariates in this study were carefully selected to capture some of the potential time-varying correlates.

With this design, each individual serves as his or her own counterfactual offering a more rigorous test of how incarceration affects adherence to the convict code (Pyrooz, McGloin, and Decker, 2017; Rabe-Hesketh and Skrondal, 2012). This is among the top reasons fixed-effect models are best suited to address the research questions in this study. In these models, person-specific effect estimates become more precise when more time points are observed for each person, and when more transitions occur in the variable of interest. Since one of the stipulations for the sample in this study was to experience at least one transition between incarcerated and

[6] These dummies can be estimated because each person has two of more observations.

street settings, and because everyone is observed for up to 11 waves, the precision of estimates in this study should be relatively high.

Three models will be run for each of the domains of the convict code. First, a bivariate fixed-effects model will be run to explore the main effect of incarceration on each of the three outcome measures. Using the equation:

$$Y_{ti} = \pi_{0i} + \pi_{1i}\,(Incarceration\text{-}pooled_{ti}) + e_{ti}$$

where $e_{ti} \sim iid,\ N(0, \sigma^2)$ and π_{1i} represents the effect of incarceration on each domain of the code, Y_{ti}, for a given person. Second, a multivariate fixed-effect model will examine how the selected covariates influence the main effect of incarceration on the outcome. Using the equation:

$$Y_{ti} = \pi_{0i} + \pi_{1i}\,(Incarceration\text{-}pooled_{ti}) + X_{ti}\,\pi_{2i} + e_{ti}$$

where $e_{ti} \sim iid,\ N(0, \sigma^2)$ and π_{1i} represents the difference in the outcome, Y_{ti}, for a given person who enters an incarcerated setting while holding a vector of covariates, X_{ti} , constant. For the third model, the disaggregated incarceration measure will serve as the primary predictor and a multivariate fixed-effect model will examine how each outcome varies across the different stages of incarceration. Using the equation:

$$Y_{ti} = \pi_{0i} + \pi_{1i}\,(Incarceration1_{ti}) + \pi_{2i}\,(Release1_{ti}) + \pi_{3i}\,(Incarceration2_{ti}) + \pi_{4i}\,(Release2_{ti}) + \pi_{5i}\,(Incarceration3_{ti}) + \pi_{6i}\,(Release3_{ti}) + \pi_{7i}\,(Incarceration4_{ti}) + \pi_{8i}\,(Release4_{t}) + X_{ti}\,\pi_{9i} + e_{ti}$$

where $e_{ti} \sim iid,\ N(0, \sigma^2)$ and each π represents the difference in code adherence for a given person associated with each incarceration stage, relative to pre-incarceration periods while holding a vector of covariates, X_{ti}, constant. Then, post hoc analyses were done to test for significant differences between each incarceration stage relative to the previous stage.

To answer the first and second research questions, π_{1i} in the bivariate and multivariate pooled incarceration models and the coefficients from the post hoc analyses from the multivariate disaggregated incarceration model will be examined. If these coefficients are statistically significant and moving in the direction that would be expected for adherence to the code (positive for moral disengagement and antisocial peers, negative for legitimacy), that would indicate incarceration, on average, significantly increases that specific domain of the convict code. To answer the third question, trends from the post hoc analyses for each of the three outcomes will be examined by incarceration stint. According to the importation model, results should show that code adherence remains stable across setting (Delisi et al., 2011; Irwin and Cressey, 1962). If results show that individual-level code adherence is higher only during periods of incarceration and drops back down to pre-incarceration levels upon release, the deprivation model will be supported (Goffman, 1961; Sykes, 1958; Sykes and Messinger, 1960). Finally, if results show that code adherence increases during incarceration periods and remains high during subsequent release periods, the durability model will be supported.

RESULTS

Using fixed-effect models, this study explores within-individual effects of incarceration on the three domains of the convict code as a person moves across incarceration stages. With 1,035 individuals each experiencing up to 4 stints of incarceration, this study observes 4,451 transitions into or out of jails and prisons offering a unique opportunity to understand how a person's adherence to the convict code may be effected by incarceration and subsequent releases. With decades of research discussing the causes and effects of prisonization, this study presents the first empirical test of how within-person adherence to the convict-code changes between incarcerated and street settings while simultaneously testing three theoretical models.

MORAL DISENGAGMENT

Table 3 reports the results from the bivariate and multivariate fixed-effect models for moral disengagement. The bivariate model (model 1) suggests there is a positive and statistically significant effect of incarceration (b=0.032; p=0.000) on moral disengagement. A positive effect here suggests within-individual code adherence is significantly higher for a specific person while incarcerated than on the streets. After controlling for common covariates in model 2, this relationship is weakened, yet maintains significant (b=0.018; p=0.015). Every covariate, except for incarceration years, was found to confound the effect on moral disengagement to some degree. Model 2 predicts individual-level moral disengagement will decrease each year with the rate of decrease slowing down over time.

Model 3 in table 3 shows the results of the second multivariate fixed-effect model which disaggregates the main effect of incarceration into stages of incarceration. Results show moral disengagement is significantly higher than pre-incarceration levels in three out of four incarceration periods and one release period. The post hoc analyses shown in table 4 and figure 3 offer a more detailed explanation of how moral disengagement varies across location. To address these patterns in terms of the three theoretical models, it is best to determine how each incarceration stint conforms to a given theoretical model.[7] Results show moral disengagement increases during a person's first (b=-0.050; p=0.006) and third (b=-0.034; p=0.032) incarceration periods and remains stable during the subsequent release periods. On the other hand, moral disengagement does not change during a persons' second incarceration stint or his or her fourth

[7] To be clear, an incarceration or release period refers to a single incarceration stage. An incarceration stint refers to one incarceration period and the corresponding release period. For example, a person's first incarceration stint includes his or her first incarceration period and first release period.

Table 3. Bivariate and Multivariate Fixed-Effects of Incarceration on Moral Disengagement

	Model 1		Model 2		Model 3	
	Coef.	*(SE)*	Coef.	*(SE)*	Coef.	*(SE)*
Incarceration (pooled)	0.032***	(0.007)	0.018*	(0.008)		
Incarceration Stage (disaggregated)						
Incarceration 1					0.050**	(0.018)
Release 1					0.030	(0.018)
Incarceration 2					0.035	(0.021)
Release 2					0.043	(0.023)
Incarceration 3					0.077**	(0.026)
Release 3					0.079**	(0.027)
Incarceration 4					0.065*	(0.031)
Release 4					-0.006	(0.033)
Current Gang			0.084***	(0.016)	0.083***	(0.016)
Prior Arrests			0.006*	(0.003)	0.005	(0.003)
Incarceration Years			-0.006	(0.004)	-0.006	(0.004)
Year			-0.025***	(0.003)	-0.027***	(0.003)
Year^2			0.003***	(0.001)	0.003***	(0.001)
Constant	1.448		1.434		1.406	
σ^2	0.235		0.231		0.231	
Within-Person R^2	0.003		0.037		0.041	

NOTES: N = 1,035, $N \times T$ = 7,768; The within-individual reference group for the incarceration stage variable is pre-incarceration person-periods.

ABBREVIATIONS: (SE) = standard error; σ^2 = within-individual variance in outcome

*** p<0.001, ** p<0.01, * p<0.05

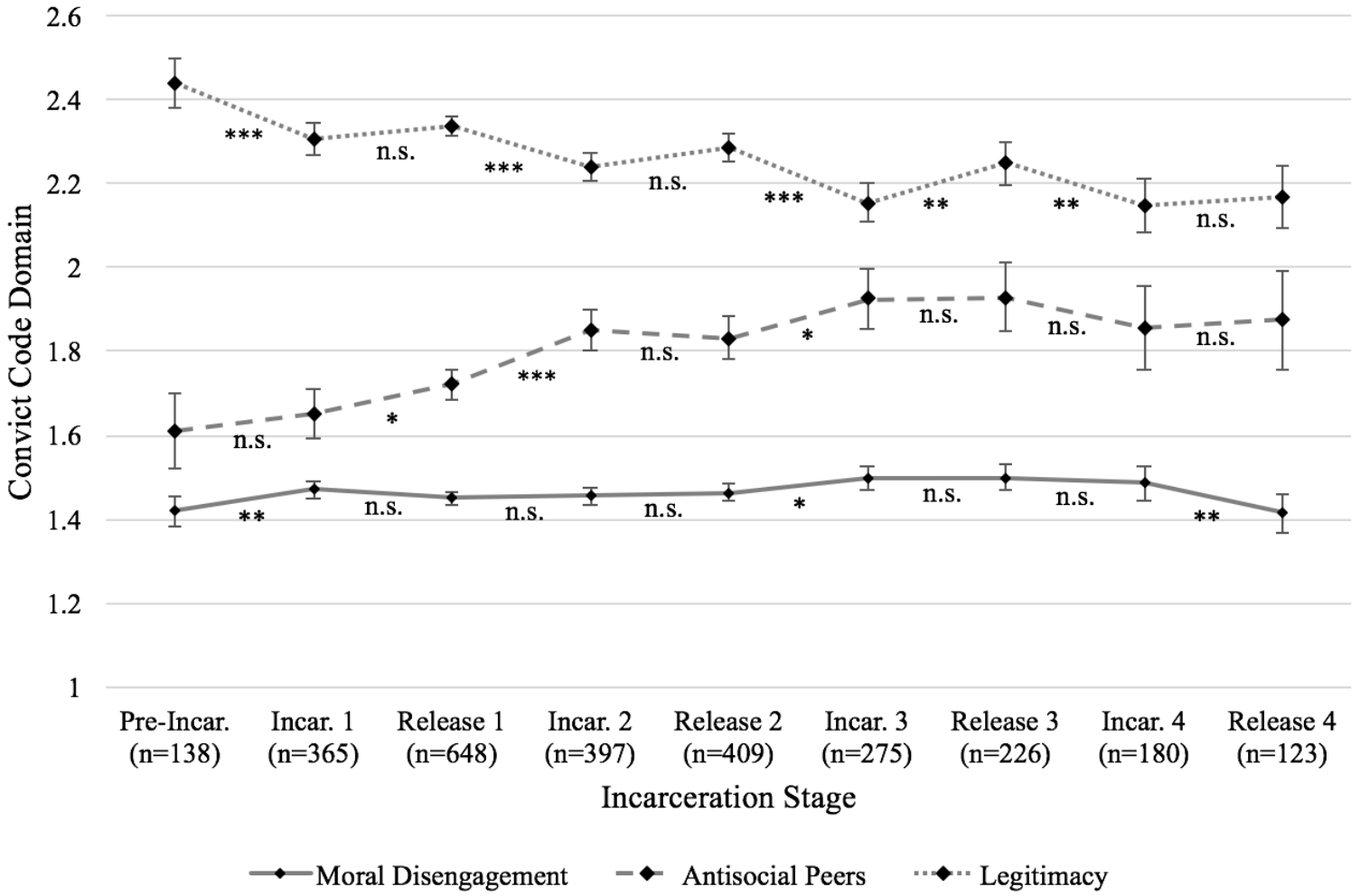
incarceration period, but decreases during the fourth release period (*b*=-0.017; *p*=0.004). The results for the first and third incarceration stints suggest support for the durability model and the second incarceration stint supports the importation model. The fourth incarceration stint; however, does not conform to any of the models. It shows support for importation upon entering prison, but deprivation upon release. The fixed-effect and post hoc results for model 3 demonstrate the importance of disaggregating incarceration into stages of incarceration because variation in moral disengagement is not homogenous across incarceration stints.

ASSOCIATION WITH ANTISOCIAL PEERS

For the second domain of the convict code, results for the bivariate model with pooled incarceration as the primary predictor show the main effect of incarceration (*b*=0.046; *p*=0.014) to be positive and statistically significant (see table 5). However, after introducing the selected covariates, results show the effect of incarceration to lose significance suggesting the relationship between incarceration and association with antisocial peers was confounded by the vector of covariates. Once again, current gang membership status (*b*=0.210; *p*=0.000) and prior arrests (*b*=0.019; *p*=0.005) are expected to cause association with antisocial peers to increase significantly; whereas each additional year of past incarceration (*b*=-0.037; *p*=0.000) is expected to significantly decrease association with antisocial peers. Lastly, association with antisocial peers is expected to decrease each year with a quadratic trend that flattens over time.

Results from model 6 suggest the disaggregation of stages of incarceration is necessary to gain a full understanding of how this domain of the convict code changes across location. As seen in table 4, antisocial peer association is not expected to change during an individual's first incarceration, but is expected to be significantly higher than pre-incarceration levels throughout each of the subsequent incarceration and release periods. Post hoc analyses shown in

Figure 3. Within-Individual Adherence to the Convict Code Across Stages of Incarceration



NOTES: N = 1,035, *N* × *T* = 7,768; Significance indicators show significant differences between two adjacent incarceration stages
*** p<0.001, ** p<0.01, * p<0.05
ABBREVIATIONS: Pre-Incar = Pre-incarceration; Incar. = Incarceration

Table 4. Multivariate Fixed-Effect Difference between Adjacent Incarceration Stages

	Prison 1	Release 1	Prison 2	Release 2	Prison 3	Release 3	Prison 4	Release 4
Moral Disengagement								
Coefficient	0.050**	-0.020	0.005	0.008	0.034*	0.002	-0.014	-0.071**
(SE)	(0.018)	(0.013)	(0.013)	(0.014)	(0.016)	(0.018)	(0.021)	(0.025)
Antisocial Peers								
Coefficient	0.041	0.069*	0.130***	-0.021	0.094*	0.004	-0.073	0.020
(SE)	(0.046)	(0.032)	(0.033)	(0.035)	(0.041)	(0.047)	(0.054)	(0.063)
Legitimacy								
Coefficient	-0.134***	0.032	-0.098***	0.044	-0.129***	0.094**	-0.102**	0.022
(SE)	(0.030)	(0.021)	(0.022)	(0.023)	(0.026)	(0.030)	(0.035)	(0.041)

NOTES: N = 1,035, $N \times T$ = 7,768; The within-individual reference group for each coefficient is the prior incarceration stage.
ABBREVIATIONS: (SE) = standard error
*** p<0.001, ** p<0.01, * p<0.05

Table 5. Bivariate and Multivariate Fixed-Effects of Incarceration on Association with Antisocial Peers

	Model 4		Model 5		Model 6	
	Coef.	*(SE)*	Coef.	*(SE)*	Coef.	*(SE)*
Incarceration (pooled)	0.046*	(0.019)	0.019	(0.019)		
Incarceration Stage (disaggregated)						
Incarceration 1					0.041	(0.046)
Release 1					0.110*	(0.046)
Incarceration 2					0.240***	(0.055)
Release 2					0.220***	(0.058)
Incarceration 3					0.314***	(0.066)
Release 3					0.318***	(0.070)
Incarceration 4					0.245**	(0.078)
Release 4					0.264**	(0.085)
Current Gang			0.210***	(0.042)	0.207***	(0.042)
Prior Arrests			0.019**	(0.007)	0.009	(0.007)
Incarceration Years			-0.037***	(0.010)	-0.050***	(0.011)
Year			-0.039***	(0.008)	-0.057***	(0.008)
Year^2			0.011***	(0.002)	0.014***	(0.002)
Constant	1.756		1.691		1.609	
σ^2	0.597		0.592		0.590	
Within-Person R^2	0.001		0.019		0.025	

NOTES: N = 1,035, $N \times T$ = 7,768; The within-individual reference group for the incarceration stage variable is pre-incarceration person-periods.

ABBREVIATIONS: (SE) = standard error; σ^2 = within-individual variance in outcome

*** p<0.001, ** p<0.01, * p<0.05

table 4 and figure 3 show the second and third incarceration stints support the durability model with increased association with antisocial peers during incarceration periods and stability of these peers during release periods. The fourth incarceration stint demonstrates support for the importation model showing no change in antisocial peer association during neither the incarceration nor release period. Interestingly, the first incarceration stint does not conform to any of the theoretical models showing no change upon a person's first incarceration period, but an increase in deviant peers upon his or her first release.

PERCEIVED LEGITIMACY

Perceived legitimacy of the criminal justice system behaves similarly to the other two domains bivariately. While incarcerated, an individual is expected to have significantly lower perceived legitimacy (b=-0.092; p=0.000) than when he or she is on the street (see table 6). After introducing select covariates in model 8, incarceration (b=-0.075; p=0.000) remains a negative and statistically significant predictor of perceived legitimacy. Among covariates, results show that as the number of prior arrests (b=-0.023; p=0.000) and linear years (b=0.022; p=0.001) partially confound the relationship between prison and perceived legitimacy.

Model 8 suggests levels of perceived legitimacy increase with each incarceration and decrease back down to the pre-incarceration levels during release periods. However, after disaggregating incarceration into incarceration stages, this pattern changes. Model 9 shows perceived legitimacy decreases and remains significantly lower than pre-incarceration levels throughout every release and incarceration (see figure 3 and table 6). Interestingly, post hoc analyses (in figure 3 and table 4) show a person's perceived legitimacy significantly decreases during every incarceration period and remains stable during every release period relative to the corresponding incarceration period. There is one exception in the third release period where

Table 6. Bivariate and Multivariate Fixed-Effects of Incarceration on Perceived Legitimacy

	Model 7		Model 8		Model 9	
	Coef.	*(SE)*	Coef.	*(SE)*	Coef.	*(SE)*
Incarceration (pooled)	-0.092***	(0.012)	-0.075***	(0.013)		
Incarceration Stage (disaggregated)						
Incarceration 1					-0.134***	(0.030)
Release 1					-0.102***	(0.030)
Incarceration 2					-0.199***	(0.035)
Release 2					-0.155***	(0.037)
Incarceration 3					-0.285***	(0.043)
Release 3					-0.191***	(0.045)
Incarceration 4					-0.293***	(0.051)
Release 4					-0.271***	(0.055)
Current Gang			0.036	(0.027)	0.040	(0.027)
Prior Arrests			-0.023***	(0.004)	-0.014**	(0.005)
Incarceration Years			-0.009	(0.007)	-0.001	(0.007)
Year			0.019***	(0.005)	0.029***	(0.005)
Year^2			-0.000	(0.001)	-0.002	(0.001)
Constant	2.323		2.43		2.496	
σ^2	0.383		0.382		0.381	
Within-Person R^2	0.009		0.013		0.018	

NOTES: N = 1,035, $N \times T$ = 7,768; The within-individual reference group for the incarceration stage variable is pre-incarceration person-periods.

ABBREVIATIONS: (SE) = standard error; σ^2 = within-individual variance in outcome

*** p<0.001, ** p<0.01, * p<0.05

results show a significant increase in perceived legitimacy. Therefore, during incarceration stints one, two, and four perceived legitimacy patterns support the durability model, but during a person's third incarceration stint the pattern more closely conforms to the deprivation model. In all four incarceration periods, legitimacy appears to decrease with each additional interaction with the justice system as predicted by the durability model. This conclusion is further verified when looking at the significant covariates for model 9. The number of prior arrests (b=-0.014; p=0.003) an individual has at a given time further decreases legitimacy; therefore, increasing adherence to the convict code.

For all three domains of the convict code, model predictability improved across the three models. This suggests the disaggregated incarceration model best predicts each of the three outcomes. However, the variance explained remained low with the highest (R^2= 0.041) explaining just over 4% of the within-individual variation in the outcome.

DISCUSSION

Prisonization has a long standing and integral role in incarceration research (Clemmer, 1940; Goffman, 1961; Irwin and Cressey, 1962; Sykes, 1958; Sykes and Messinger, 1960). Adherence to the convict code has been discussed in association with decreased institutional control (Thomas et al., 1981) and decreased success in reentry (Irwin and Cressey, 1962; Thomas et al., 1981; Zingraff, 1975). Furthermore, some researchers have empirically linked select domains of the convict code to increased institutional misconduct and decreased victimization (Mitchell, 2018), whereas others have found an inverse relationship between code adherence and misconduct arguing that those who are more highly prisonized know how to manipulate the system and can evade trouble (Barak-Glantz, 1983). Because of these potential consequences of prisonization, research on the topic remains important despite the decreased

emphasis of jail and prison research during the 80s and 90s. In fact, some may argue that the revival of prisonization research is more important now than ever with the changing contexts on the street and incarcerated settings (Kreager and Kruttschnitt, 2018; Stuart and Miller, 2017; Wacquant, 2001). With the era of mass incarceration upon us, gaining better insight of how location influences the three domains of the convict code allows for a better understanding of how individuals carry the prison subculture with them as they move into and out of incarcerated settings.

The current study offers the first empirical investigation of the within-individual effect of incarceration on adherence to the convict code using longitudinal data that follows criminal justice involved individuals into and out of incarcerated settings (Mulvey, 2012). The purpose of this study is threefold. First, the fixed-effect design of this study allows for a rigorous investigation of the effect of incarceration on the three domains of the convict code within an individual. Second, the longitudinal structure of the data allows for a deeper understanding of the way initial incarceration, initial release, and each subsequent incarceration and release differ in their effect on code adherence. Neither within-individual effects across location, nor incarceration stage-specific effects have ever been explored in terms of adherence to the code. This approach offers a unique opportunity that could help improve both incarceration and reentry policy and programming. The third and final purpose of this study is to conduct a theoretical test of the importation (Irwin and Cressey, 1962; Jacobs, 1977) and deprivation (Goffman, 1961; Sykes, 1958; Sykes and Messinger, 1960) models while proposing a third theoretical model termed the durability model. The novel approach to prisonization research presented in this study uses trends established across location to investigate each of these theories, rather than comparing the two traditional theories in terms of subsets of covariates as others have done in the

past (Akers et al., 1977; Alpert, 1979; Lawson et al., 1996; Paterline and Peterson, 1999; Reisig and Lee, 2000; Rhodes, 1979; Thomas, 1973, 1977). Results from this study support three broad conclusions which will be discussed in the following pages.

First, a person's adherence to the convict code is never expected to decrease during an incarceration period. The post hoc analyses are most useful for addressing how adherence to the convict code can be expected to change when a person is incarcerated. For criminal identity and beliefs and antisocial group cohesion, two of the four incarceration periods for each domain show increases in adherence while the other two show no change. On the other hand, opposition to the criminal justice system shows all four incarceration periods are expected to result in increased adherence. These findings are consistent with past research that has found that negative interactions with police and the law are predictive of negative attitudes toward the justice system and legal cynicism (Berg et al., 2016; Griffiths and Winfree, 1982; Scaglion and Condon, 1980).

The second major conclusion that can be drawn from this study is that, with only three exceptions, adherence to the code does not change during release periods relative to corresponding incarceration periods.[8] This finding supports the belief that it is time to reconsider the theoretical approaches to prisonization. Although aspects of both importation and deprivation approaches are present in the findings of this study, neither model adequately explains why adherence may increase during incarceration periods and remain stable during release periods.

The third major conclusion in this study is that patterns of code adherence across location suggest considerable support for the durability model. As discussed in the results section, both

[8] Each of the three domains contains one exception to this trend. There is a significant decrease in adherence in the fourth release period of the criminal identity and beliefs domain, a significant increase in adherence in the first release period of the antisocial group cohesion domain, and a significant decrease in adherence in the third release period of the opposition toward the justice system domain.

criminal identity and beliefs and antisocial group cohesion have two incarceration stints that conform to the durability model, one that conforms to importation, and one that does not conform to any of the three models.[9] Opposition to the criminal justice system, on the other hand, has three incarceration stints that conform to the durability model and one which conforms to the deprivation model. Overall, these trends largely support the durability model over either importation or deprivation alone.

It is possible that the additive effect of incarceration on adherence to the code shown in this analysis was largely influenced by selection bias of those who experience multiple incarcerations. In other words, the type of individual who experiences four incarcerations may be fundamentally different than the type of individual who experiences one incarceration. These fundamental differences could skew the data in a way that suggests support for the durability model for individuals independent of the number of incarcerations they experience, when the pattern suggested by the durability model may only be applicable for those who experience numerous incarcerations. To be certain these results were not influenced by selection bias, further analysis was conducted to ensure the patterns discussed above existed among individuals after being disaggregated into groups based a person's total number of observed incarcerations. This analysis confirmed that the durability model maintained considerable support even after disaggregation. Individuals who experience one incarceration displayed similar patterns of code adherence during their one incarceration stint as those who experience two, three, or four stints of incarceration.

[9] The two incarceration stints which are theoretically non-conforming were unanticipated and difficult to explain. Further investigation is needed to understand the mechanisms that may be in place in each of these situations.

Support for the durability model verifies past researcher's suggestions of long-term effects of prisonization (Paterline and Peterson, 1999; Thomas et al., 1981; Zingraff, 1975). This study is among the first to confirm that cultural attitudes and beliefs a person holds in prison are carried with them to the streets as would be predicted by past research on the transmission of culture (Clemmer, 1940; Hannerz, 1969; Swidler, 1986). Although this relationship requires further investigation and replication, it presents the potential to inform reentry policy and programming. This finding suggests an individual is often leaving incarcerated settings with attitudes, beliefs, and peers that are more conducive to a criminal lifestyle than those he or she had prior to that given incarceration period.

Programming implications from the durability model emphasize the ways adherence to the convict code decreases a person's openness to reentry programming. As code adherence increases, a person is expected to be more resistant to reentry programming offered prior to release (Thomas et al., 1981). Therefore, failed rehabilitation and reentry is likely less about the failure to offer reentry programming, and more about the inability for current programming to reach those who are highly prisonized. Reevaluating reentry programming so that it first focuses on establishing positive relationships between incarcerated individuals and the system may go far in improving reentry experiences. This is not a novel approach to prevention and intervention programming. One of the main objectives of the revised Gang Resistance Education and Training program (G.R.E.A.T. II) was to improve attitudes toward police among high-risk adolescents (Esbensen et al., 2013). This program, which has proven to effectively improve citizen-official relationships, should be used to inform improvements in reentry programming. If programming can better mitigate the antisocial attitudes and beliefs of those who are highly prisonized, prison officials will be better situated to adequately prepare incarcerated individuals

for reentry. Multiple criminological theories suggest a positive relationship between antisocial attitudes and beliefs and deviant behavior (Hirschi, 1969; Sutherland and Cressey, 1984) and these theories have been supported empirically. Therefore, implementing policy and programming that focuses on neutralizing or restoring antisocial attitudes and beliefs could have beneficial effects on reentry and future offending.

LIMITATIONS AND FUTURE DIRECTIONS

This study benefits from multiple novel and unique circumstances that allow for the rigorous exploration of the questions at hand; however, it is not without limitations. One limitation in this study is that, although the Pathways dataset contains monthly calendar data which includes numerous variables, the three outcome variables used in this study are not part of this monthly data. Since moral disengagement, association with antisocial peers, and perceived legitimacy are only recorded in the baseline and follow-up data, this limits the ability for more precise tracking of changes in code adherence across time within each location. If monthly data were available, it would be possible to more closely investigate the *process* of prisonization and the timing that is associated with changes in attitudes and beliefs in each setting.

A second limitation of this study concerns the operationalization of the three domains of the convict code. Although the three constructs that were used to operationalize each of the domains are the most appropriate measures available in the data, they do not perfectly align with the conceptualization of each of the domains. For example, moral disengagement does an adequate job of measuring a person's criminal beliefs, but it does little in terms of measuring criminal identity. This the weakest of the three constructs in terms of congruence between domain conceptualization and operationalization. Next, although antisocial peers is a sufficient measure of an individual's association with antisocial others, it does not necessarily speak to the

cohesion or solidarity amongst them. On the other hand, congruence between the conceptualization and operationalization of the third domain is very strong. Future studies would benefit from examining measures that more fully address the first two domains of the code.

Although this study breaks new ground in terms of prisonization research, it only scratches the surface of understanding adherence to the convict code across time and location. There are a few directions that this research should take in the future to further advance our knowledge and understanding of code adherence trajectories. First, future research should introduce random effects to these models and investigate the ways adherence trends vary across different groups of people. It is likely that code adherence patterns vary among race/ethnic groups and genders (Massey and Denton, 1993). Second, future research should examine how adherence to the code varies across time in the free world after a single incarceration stint. This research will help expand our understanding of how long adherence to the code is maintained after release and how much variation, if any, exists across long durations of release. Third, future research should investigate how these domains of the convict code influence institutional misconduct, criminal activity on the street, victimization, and recidivism. These questions will help establish an understanding of the long-term consequences of incarceration and adherence to the convict code.

In conclusion, this study presents the first longitudinal exploration of how within-individual adherence to the convict code varies across incarceration stages. There are three major takeaways from this study. First, a person's adherence to the code is never expected to decrease during an incarceration period. Second, adherence to the code rarely changes during release periods relative to corresponding incarceration periods. And third, neither the importation nor deprivation models adequately explain the patterns of adherence to the code found in this study.

Rather the new durability model best predicts changes in code adherence as an individual moves across stages of incarceration. These findings enhance the understanding of a phenomenon of great interest to the social sciences—how incarcerated settings effect criminal attitudes and beliefs, and how these attitudes and beliefs vary across the various stages of incarceration.

REFERENCES

Akers, Ronald L., Norman S. Hayner, and Werner Gruninger. 1977. "Prisonization in Five Countries - Type of Prison and Inmate Characteristics." *Criminology* 14(4):527–54.

Alpert, Geoffrey P. 1978. "Comparative Study on the Effects of Ideology on Prisonization - A Research Note." *LAE Journal of the American Criminal Justice Association* 41(1):77–86.

Alpert, Geoffrey P. 1979. "Patterns of Change in Prisonization: A Longitudinal Analysis." *Criminal Justice and Behavior* 6(2):159–74.

Alpert, Geoffrey P., G. Noblit, and J. J. Wiorkowski. 1977. "Comparative Look at Prisonization: Sex and Prison Culture." *Quarterly Journal of Corrections* 1(2):29–34.

Bandura, Albert, Claudio Barbaranelli, Gian Vittorio Caprara, and Concetta Pastorelli. 1996. "Mechanisms of Moral Disengagement in the Exercise of Moral Agency." *Journal of Personality and Social Psychology* 71(2):364–74.

Barak-Glantz, Israel L. 1983. "Patterns of Prisoner Misconduct: Toward a Behavioral Test of Prisonization." *Sociological Focus* 16(2):129–46.

Berg, Mark T., Eric A. Stewart, Jonathan Intravia, Patricia Y. Warren, and Ronald L. Simons. 2016. "Cynical Streets: Neighborhood Social Processes and Perceptions of Criminal Injustice." *Criminology* 54(3):520–47.

Berk, Bernard B. 1966. "Organizational Goals and Inmate Organization '." *American Journal of Public Health* 71(5):522–34.

Bukstel, Lee Harrison. 1980. "The Development of a Standard Prisonization Index." *Doctoral Dissertation, University of South Carolina*.

Camp, Scott D., Gerald G. Gaes, Neal P. Langan, and William G. Saylor. 2003. "The Influence of Prisons on Inmate Misconduct: A Multilevel Investigation." *Justice Quarterly*

20(3):501–33.

Carson, E. Ann. 2014. “Prisoners in 2013.” *Bureau of Justice Statistics* (September):1–34.

Carson, E. Ann and Elizabeth Anderson. 2016. “Prisoners in 2015.” *British Journal of Criminology*.

Carson, EA and WJ Sabol. 2016. *Aging of the State Prison Population, 1993-2013*.

Clear, Todd R. and Natasha A. Frost. 2015. *The Punishment Imperative: The Rise and Failure of Mass Incarceration in America*. New York Press.

Clemmer, D. 1940. *The Prison Community.* Christopher Publishing House.

Delisi, Matt, Chad R. Trulson, James W. Marquart, Alan J. Drury, and Anna E. Kosloski. 2011. “Inside the Prison Black Box: Toward a Life Course Importation Model of Inmate Behavior.” *International Journal of Offender Therapy and Comparative Criminology* 55(8):1186–1207.

Esbensen, Finn-Aage, D. Wayne Osgood, Dana Peterson, Terrance J. Taylor, and Dena C. Carson. 2013. “Short- and Long-Term Outcome Results from a Multisite Evaluation of the G.R.E.A.T. Program.” *Criminology & Public Policy* 12(3):375–411.

Faine, John R. 1973. “A Self-Consistency Approach to Prisonization*.” *The Sociological Quarterly* 14(4):576–88.

Feeley, Malcolm M. and Jonathan Simon. 1992. “The New Penology: Notes on the Emerging Strategy of Corrections and Its Implications.” *Criminology* 30(4):449–74.

Garabedian, Peter G. 1963. “Social Roles and Processes of Socialization in the Prison Community.” *Source: Social Problems* 11(2):139–52.

Goffman, Erving. 1961. “The Characteristics of Total Institutions.” Pp. 313–38 in *Symposium on preventive and social psychiatry*. Washington, DC: Walter Reed Army Medical Centre.

Gordon, Rachel A., Benjamin B. Lahey, Eriko Kawai, and Rolf Loeber. 2004. "Antisocial Behavior and Youth Gang Membership: Selection and Socialization." *Criminology* 42(1):55–87.

Granovetter, Mark. 1973. "The Strength of Weak Ties." *The American Journal of Sociology* 78(6):1360–80.

Griffiths, Curt Taylor and L. Thomas Winfree. 1982. "Attitudes Toward the Police: A Comparison of Canadian and American Adolescents." *International Journal of Comparative and Applied Criminal Justice* 6(1–2):127–41.

Hagan, John. 1993. "The Social Embeddedness of Crime and Unemployment." *Criminology* 31(4):465–91.

Hannerz, Ulf. 1969. *Soulside: Inquiries into Ghetto Culture and Community.* New York, NY: Columbia University Press.

Hirschi, Travis. 1969. *Causes of Delinquency*. University of California Press.

Huebner, Beth M. 2007. "Racial and Ethnic Differences in the Likelihood of Marriage: The Effect of Incarceration." *Justice Quarterly* 24(1):156–83.

Irwin, J. 1970. *The Felon*. University of California Press.

Irwin, John. 1980. *Prisons in Turmoil*. Boston, MA: Little, Brown.

Irwin, John and Donald R. Cressey. 1962. "Thieves, Convicts and the Inmate Culture." *Social Problems* 10(2):142–55.

Jacobs, James B. 1977. *Stateville: The Penitentiary in Mass Society*. University of Chicago Press.

Kreager, Derek A. and Candace Kruttschnitt. 2017. "Inmate Society in the Era of Mass Incarceration." *Annual Review of Criminology*.

Lattimore, Pamela K. and Christy A. Visher. 2009. *The Multi-Site Evaluation of SVORI: Summary and Synthesis*. Washington, DC: Urban Institute.

Lawson, Darren P., Chris Segrin, and Teresa D. Ward. 1996. "The Relationship Between Prisonization and Social Skills among Prison Inmates." *The Prison Journal* 76(3):293–309.

Massey, Douglas S. and Nancy A. Denton. 1993. *American Apartheid: Segregation and the Making of the Underclass*. Harvard University Press.

Mathiesen, T. 1965. *The Defenses of the Weak: A Sociological Study of a Norwegian Correctional Institution*. Routledge.

Miller, Jerome G. 1996. *Search and Destroy African-American Males in the Criminal Justice System*. Cambridge University Press.

Mitchell, Meghan M., Chantal Fahmy, David C. Pyrooz, and Scott H. Decker. 2017. "Criminal Crews, Codes, and Contexts: Differences and Similarities across the Code of the Street, Convict Code, Street Gangs, and Prison Gangs." *Deviant Behavior* 38(10):1197–1222.

Mitchell, Meghan M., Kallee Mccullough, Jun Wu, David C. Pyrooz, and Scott H. Decker. 2018. "Survey Research with Gang and Non-Gang Members in Prison: Operational Lessons from the LoneStar Project." *Trends in Organized Crime* 1–29.

Mulvey, Edward P. 2012. "Research on Pathways to Desistance [Maricopa County, AZ and Philadelphia Country, PA]: Subject Measures, 2000-2010." *Ann Arbor, MI:Inter-University Consortium for Political and Social Reserach*.

Mumola, Christopher J. and Allen J. Beck. 1997. "Prisoners in 1996." *Bureau of Justice Statistics*.

National Research Council. 2014. *The Growth of Incarceration in the United States: Exploring Causes and Consequences*. edited by J. Travis, B. Western, and F. Stevens Redburn.

Washington, DC: The National Academies Press.

Nguyen, Holly, Thomas A. Loughran, Ray Paternoster, Jeffrey Fagan, and Alex R. Piquero. 2017. “Institutional Placement and Illegal Earnings: Examining the Crime School Hypothesis.” *Journal of Quantitative Criminology* 33:207–35.

Paterline, Brent A. and David M. Peterson. 1999. “Structural and Social Psychological Determinants of Prisonization.” *Journal of Criminal Justice* 27(5):427–41.

Pyrooz, David C., Nancy Gartner, and Molly Smith. 2017. “Consequences of Incarceration for Gang Membership: A Longitudinal Study of Serious Offenders in Philadelphia and Phoenix.” *Criminology* 00(0):1–34.

Pyrooz, David C., Jean Marie McGloin, and Scott H. Decker. 2017. “Parenthood as a Turning Point in the Life Course for Male and Female Gang Members: A Study of Within-Individual Changes in Gang Membership and Criminal Behavior.” *Criminology* 55(4):869–99.

Pyrooz, David C., Gary Sweeten, and Alex R. Piquero. 2013. “Continuity and Change in Gang Membership and Gang Embeddedness.” *Journal of Research in Crime and Delinquency* 50(2):239–71.

Rabe-Hesketh, S. and Anders Skrondal. 2012. *Multilevel and Longitudinal Modeling Using Stata*. STATA Press.

Ramirez, John. 1984. “Prisonization, Staff, and Inmates: Is It Really about Us Versus Them.” *Criminal Justice and Behavior* 11(4):423–60.

Reisig, Michael D. and Yoon Ho Lee. 2000. “Prisonization in the Republic of Korea.” *Journal of Criminal Justice* 28:23–31.

Rhodes, L. M. 1979. “Impact of Social Anchorage in Prisonization.” Doctoral Dissertation Texas

A&M University.

Scaglion, Richard and Richard G. Condon. 1980. “Determinants of Attitudes toward City Police.” *Criminology* 17(4):485–94.

Schrag, CC. 1944. “Social Types in a Prison Community.”

Schubert, Carol a. et al. 2004. “Operational Lessons from the Pathways to Desistance Project.” *Youth Violence and Juvenile Justice* 2(3):237–55.

South, Catherine R. and Jane Wood. 2006. “Bullying in Prison: The Importance of Perceived Social Status, Prisonization, and Moral Disengagement.” *Aggressive Behavior* 32:490–501.

Steiner, Benjamin and John Wooldredge. 2009. “Rethinking the Link Between Institutional Crowding and Inmate Misconduct.” *The Prison Journal* 89(2):205–33.

Stretesky, Paul B., Mark Pogrebin, N. Prabha Unnithan, and Gerry Venor. 2007. “Prisonization and Accounts of Gun Carrying.” *Journal of Criminal Justice* 35:485–97.

Stuart, Forrest and Reuben Jonathan Miller. 2017. “The Prisonized Old Head: Intergenerational Socialization and the Fusion of Ghetto and Prison Culture.” *Journal of Contemporary Ethnography* 46(466):673–98.

Sutherland, Edwin H. and Donald R. Cressey. 1984. “Differential Association Theory.” *Deviant behavior* 125–31.

Swidler, Ann. 1986. “Culture in Action: Symbols and Strategies.” *American Sociological Review* 51(2):273–86.

Sykes, Gresham M. 1958. *The Society of Captives: A Study of a Maximum Security Prison*. Princeton University Press.

Sykes, Gresham M. and Sheldon L. Messinger. 1960. “The Inmate Social System.” Pp. 5–19 in *Theoretical studies in social organization of the prison*.

Thomas, Charles W. 1973. “Prisonization or Resocialization? A Study of External Factors Associated with the Impact of Imprisonment.” *Journal of Research in Crime and Delinquency* 10(1):13–21.

Thomas, Charles W. 1977. “Theoretical Perspectives on Prisonization: A Comparison of the Importation and Deprivation Models.” *Journal of Criminal Law and Criminology* 68(1):134–45.

Thomas, Charles W. and Samuel C. Foster. 1972. “Prisonization in the Inmate Contraculture.” *Social Problems* 20(2):229–39.

Thomas, Charles W., David M. Petersen, and Rhonda M. Zingraff. 1978. “Structural and Social Pshychological Correlates of Prisonization.” *Criminology* 16(3):383–93.

Thomas, Charles W., David M. Peterson, and Robin J. Cage. 1981. “A Comparative Organizational Analysis of Prisonization.” *Criminal Justice Review* 6(1):36–43.

Thomas, WI and F. Znaniecki. 1918. *The Polish Peasant in Europe and America: Monograph of an Immigrant Group*. University of Chicago Press.

Thornberry, Terence P., Alan J. Lizotte, Marvin D. Krohn, Margaret Farnworth, and Sung Joon Jang. 1994. “Delinquent Peers, Beliefs, and Delinquent Behavior: A Longitudinal Test of Interactional Theory.” *Criminology* 32(1):47–83.

Trammell, Rebecca. 2009. “Values, Rules, and Keeping the Peace: How Men Describe Order and the Inmate Code in California Prisons.” *Deviant Behavior* 30(8):746–71.

Tyler, Tom R. 1990. *Why People Obey the Law*. New Haven and London: Yale University Press.

Tyler, Tom R. and Yuen Huo. 2002. *Trust in the Law: Encouraging Public Cooperation with the Police and Courts Through*. Russell Sage Foundation.

Wacquant, Loïc. 2001. “Deadly Symbiosis : When Ghetto and Prison Meet and Mesh.”

Punishment & Society 3(1):95–134.

Wakefield, Sara and Christopher Uggen. 2010. "Incarceration and Stratification." *Annual Review of Sociology* 36(1):387–406.

Walters, Glenn D. 2003. "Changes in Criminal Thinking and Identity in Novice and Experienced Inmates: Prisonization Revisited." *Criminal Justice and Behavior* 30(4):399–421.

Western, Bruce, Anthony Braga, and Rhiana Kohl. 2017. "A Longitudinal Survey of Newly-Released Prisoners: Methods and Design of the Boston Reentry Study." *Federal Probation* 81(1):32–40.

Wheeler, Stanton. 1961. "Socialization in Correctional Communities." *American Sociological Review* 26(5):697–712.

White, Denise Yvette. 1981. "The Effects of Time in Prison, Esteem and Disclosure on Prisonization."

Zingraff, Matthew T. 1975. "Prisonization as an Inhibitor of Effective Resocialization." *Criminology* 13(3):366–88.

Zingraff, Matthew T. 1980. "Inmate Assimilation: A Comparison of Male and Female Delinquents." *Criminal Justice and Behavior* 7(3):275–92.