

EXPLORING THE CONSEQUENCES OF RELATIONSHIPS WITH OFFENDERS:  
EVIDENCE OF IMPLICIT CRIMINAL SELF-EXPANSION

by

MARINA K. SAAD

A Dissertation submitted to the

Graduate School-Newark

Rutgers, The State University of New Jersey

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

School of Criminal Justice

written under the direction of

Dr. Bonita M. Veysey

and approved by

---

Bonita M. Veysey

---

Joel Miller

---

Elizabeth Griffiths

---

Luis M. Rivera

Newark, New Jersey

May 2019

Copyright page:

©2019

Marina K. Saad

ALL RIGHTS RESERVED

## ABSTRACT OF THE DISSERTATION

Exploring the Consequences of Relationships with Offenders: Evidence of Criminal Self-

Expansion

By MARINA K. SAAD

Dissertation Director:

Dr. Bonita M. Veysey

### Abstract

Close relationships can influence one's idea of who they are. Close relationships in which people engage in frequent and positive experiences with each other can lead people to associate with the social groups that belong to the other person. This process can occur both implicitly, or automatically and explicitly, or consciously. The overarching goals of this doctoral dissertation research are to test whether direct relationships and indirect experiences with criminals leads individuals to implicitly and/or explicitly associate with the social group criminal, and to examine the conditions under which implicit and explicit associations with the group criminal may be strengthened. Across three studies, including two experimental studies, this dissertation tests the general hypotheses that participants who have either direct relationships or indirect experiences with offenders will exhibit stronger implicit, but not explicit associations with the group criminal compared to those without such relationships, and; that among participants who have relationships with offenders, participants who are reminded of their past positive experiences will exhibit stronger implicit but not explicit

associations with the group criminal compared to participants who are not reminded of such experiences. These hypotheses will be tested across three samples of non-criminal people who have relationships with offenders. Study 1 utilizes a sample of friends and family members of offenders, Study 2 utilizes a sample of parole officers, and Study 3 utilizes a sample of criminal justice students. Results showed that among participants who had personal relationships with offenders, participants who were reminded of a past experience, regardless of the type of reminder, and felt close to an offender exhibited stronger implicit associations with the group criminal in comparison to participants who were not reminded of a past experience. Further, parole officers who were reminded of positive experiences exhibited stronger implicit associations with the group criminal in comparison to those who were reminded of negative experiences. Collectively, this dissertation research may support efforts to improve relationships between non-criminal others and offenders and improve the overall well-being of non-criminal others who have relationships with offenders. In addition, this research may also support efforts to create relationships which facilitate desistance.

*Keywords:* desistance, self-expansion, criminal identity, implicit, explicit

## Acknowledgment and Dedication

I would like to dedicate this dissertation to my husband and best friend Peter whose support is invaluable. There are no words to express how thankful I am for your unwavering encouragement and unconditional love. Through thick and thin, you have helped me push through obstacles and celebrate my accomplishments during this journey and I am so truly grateful. I love you forever and always.

Equally important, I would like to thank my family, who supported me through my academic endeavors. Mom and Dad, thank you for your support and for encouraging me and inspiring me to follow my dreams. I could not have completed this journey without your love, support, and prayers. I hope I have made you both proud. To my brother Peter and sister Monica, your passion and commitment to everything you do is inspiring. Thank you for your feedback on my presentations, the laughs you have provided, and for always cheering me on. To my in-laws, I sincerely appreciate your encouragement. I am especially thankful for my mother in-law for giving me something to look forward to after a long day with the endless home cooked meals. To my Grandmother, Uncles Adel, Said, George, and Rafaat, Aunt Nermeen, Michael, Gabriel, Marian, and Joanna thank you for your never-ending support. Also, special thank you to Meryam, who is like a sister to me, and has been one of my biggest cheerleaders over the course of my graduate career. Finally, to all my friends who I call family, I appreciate every one of you and your endless support. From the bottom of my heart, I love you all.

I would like to express my deep appreciation to my advisor, Dr. Bonita M. Veysey, who has challenged me to reach and exceed all of my goals. Thank you for guiding me through this journey and helping me to grow academically and

professionally. Whenever I felt like I did not belong, you always found a way to reinvigorate my passion and help me persevere. I am beyond grateful for your mentorship and guidance that began since my time as an undergraduate. Your guidance and mentorship has helped me to become the teacher and researcher I am today. I hope to pass down the many things I have learned from you to my future students.

I would like to thank Dr. Luis M. Rivera, who took on an extra undergraduate student from a different department eight years ago, and since then has been a steadfast supporter. Your passion and enthusiasm are truly inspiring and empowering. Thank you for introducing me to social psychology and helping me to grow into the academic I am today. I would also like to thank my committee members, Dr. Elizabeth Griffiths and Dr. Joel Miller. Thank you for all of the feedback you have given me not only on my dissertation, but also on manuscripts and practice presentations. Your feedback and suggestions were both instructive and helpful in making my research a success.

A special thank you to Dr. Nicole Sachs, Dr. Alexandra Margevich, and future Drs. Amanda D'Souza, Ntasha Bhardwaj, Jo Kubik, and Morgan Pater I appreciate all of the times you patiently listened to me, encouraged me, and celebrated with me. I cannot imagine what graduate school would have been like without you. And to the Rutgers Implicit Social Cognition (RISC) Lab- future Drs. Chase Montagnet, Claudia Pinzon, Tina Riefsteck, and our various research assistants past and present – thank you for your thoughtful feedback on manuscripts and presentations.

Each and everyone one of you has helped mold me in the academic and woman I am today. I am blessed and thankful beyond measure to have been able to complete this journey and obtain my Ph.D.

## Table of Contents

Abstract.....	ii
Acknowledgement.....	iv
Chapter 1: Introduction.....	1
Chapter 2: Theoretical Framework.....	12
Social Identity and Self-Categorization Theories .....	12
Implicit Social Cognition Theory .....	16
The Role of Others in Changing a Criminal Identity .....	26
Foundations of Self-Expansion Theory.....	29
Self-Expansion with the Social Group Criminal .....	39
Chapter 3: Overview.....	44
Overview of the Present Research .....	44
Chapter 4: Personal Relationships with Offenders Predict Self-Expansion (Study 1)....	51
Collateral Consequences.....	52
Self-Expansion in Personal Relationships with Offenders.....	54
Study Overview.....	58
Method.....	60
Results.....	71
Discussion.....	85
Chapter 5: Professional Relationships with Offenders Predict Self-Expansion (Study 2).....	91
The Parole Officer-Parolee Relationship.....	92
Professional Self-Expansion.....	95

Self-expansion in Parole Officers.....	96
Theoretical Moderators.....	98
Study Overview.....	100
Participants and Design.....	101
Manipulated Variable.....	103
Measured Variables.....	104
Procedure .....	105
Results.....	105
Discussion.....	116
Chapter 6: Indirect Experiences with Offenders Predict Self-Expansion (Study 3).....	119
Cognitions of Criminal Justice Students .....	120
Non-Relational Self-Expansion.....	123
Self-expansion in Criminal Justice Students .....	127
Study Overview .....	130
Pretest .....	131
Study 3.....	136
Results.....	140
Discussion .....	144
Chapter 7: Discussion .....	150
Theoretical Considerations.....	152
Self-Expansion and Implicit and Explicit Criminal-Self Associations.....	157
Implications of Self-Expansion and Implicit Criminal-Self Associations.....	163



Chapter 8: Limitations, Implications and Conclusions .....	168
Limitations and Future Directions.....	168
Policy and Practice Implications .....	174
Conclusions.....	178
References.....	179
Footnotes.....	197
Appendix.....	198

## Lists of Tables

Table 1.....	
<i>Research questions, related hypotheses, and studies in which they will be tested.</i>	
.....	45
Table 2.....	
<i>General research questions and related hypotheses tested in Study 1.....</i>	59
Table 3.....	
<i>Study specific research questions and related hypotheses tested in Study 1.....</i>	60
Table 4.....	
<i>Hierarchical Multiple Regression Analyses Predicting Implicit Criminal-Self</i>	
<i>Association IAT scores from Closeness and Experience Condition Manipulation</i>	
.....	82
Table 5.....	
<i>General research questions and related hypotheses tested in Study 2.....</i>	101
Table 6.....	
<i>Study specific research questions and related hypotheses tested in Study 2.....</i>	101
Table 7.....	
<i>Data Collection Sites.....</i>	102
Table 8.....	
<i>Characteristics of Sample Participant (N=84).....</i>	103

Table 9.....	
<i>Zero-Order Correlations between Implicit Criminal-Self Association, Subjective Group Identification, Subjective Role, Occupational Strategy, and demographic factors (N=84).....</i>	<i>106</i>
Table 10.....	
<i>Zero-Order Correlations between Implicit Criminal-Self Association, Subjective Group Identification, Subjective Role, Occupational Strategy, and demographic factors.....</i>	<i>107</i>
Table 11.....	
<i>Hierarchical Multiple Regression Analyses Predicting Implicit Criminal-Self Association Strength from Parole Officer-Parolee Condition Manipulation and Subjective Role.....</i>	<i>109</i>
Table 12.....	
<i>Hierarchical Multiple Regression Analyses Predicting Implicit Criminal-Self Association Strength from Parole Officer-Parolee condition Manipulation and Occupational Strategy.....</i>	<i>110</i>
Table 13.....	
<i>Hierarchical Multiple Regression Analyses Predicting Implicit Criminal-Self Association Strength from Parole Officer-Parolee condition Manipulation and Subjective Group Identification .....</i>	<i>111</i>
Table 14.....	
<i>General research questions and related hypotheses tested in Study 3 .....</i>	<i>131</i>

Table 15.....	
<i>Study specific research questions and related hypotheses tested in Study 3.....</i>	131
Table 16.....	
<i>Cross-tabulation of Racial-Ethnic Identification of Stimuli in Pretest by Criminal Behavior.....</i>	134
Table 17.....	
<i>Mean ratings of well-known criminal and non-criminal IAT stimuli on criminal behavior and valence. ....</i>	136
Table 18.....	
<i>Zero-Order Correlations between Implicit and Explicit Criminal-Self Associations, Implicit and Explicit Famous Criminal-Self Associations, and demographic factors (N=92) ....</i>	141
Table 19.....	
<i>Zero-Order Correlations between Implicit and Explicit Criminal-Self Associations, Implicit and Explicit Famous Criminal-Self Associations, and demographic factors. ....</i>	142

## Lists of Figures

Figure 1A.....	
<i>Network of associations between the self, social groups, and attributes related to the self.....</i>	18
Figure 1B.....	
<i>Network of associations following a personal experience in the criminal justice system. ....</i>	19
Figure 2.....	
<i>Self-expansion of the self with a close other and the traits of the close other.....</i>	31
Figure 3.....	
<i>Self-expansion of the self with a close other and the social group of the close other.....</i>	34
Figure 4.....	
<i>Self-expansion of the (non-criminal) self with the group criminal .....</i>	40
Figure 5.....	
<i>Effect of reminders of past experiences and closeness on implicit criminal-self associations.....</i>	79
Figure 6.....	
<i>Combined effect of reminders of past experiences and closeness on implicit criminal-self associations.....</i>	83
Figure 7.....	
<i>Mean Implicit Criminal Association Scores by Parole Officer-Parolee Condition Manipulation.....</i>	108

## Lists of Appendices

Appendix A.....	
<i>Pretest Feeling Thermometer</i> .....	198
Appendix B.....	
<i>Pretest Criminal Behavior</i> .....	207

## **Chapter 1: Introduction**

Consider the following scenario: You are married to an attorney. Every night over dinner you and your spouse talk about his or her day at work, including challenges he or she is facing, upcoming projects, and workplace stories. You may even visit your spouse at work or accompany him or her to work functions. During these interactions, you learn how your spouse perceives situations or has developed particular traits as a function of his or her profession. Over time, you too may begin to perceive situations similarly to your spouse or you may believe you too embody his or her traits. Due to the knowledge you have acquired about being an attorney, you may even think of yourself as an attorney by association.

This suggests that close relationships can influence individuals' understanding of who they are; that is, their identity. This phenomenon can also apply to individuals in close relationships with those who belong to a stigmatized group. A stigma can be defined as "any attribute which is deeply discrediting" (Goffman, 1963, p. 3) (e.g., a physical disability, a "tribal" characteristic, an acquired label such as criminal). Goffman (1963) calls the people who have relationships with individuals who carry such a stigma "the wise," and defines them as "persons who are normal but whose special situation has made them intimately privy to the secret life of the stigmatized individual and sympathetic with it" (p. 28). This process occurs through relationships in which the stigmatized and "the wise" spend time together, the stigmatized individual shares information about himself or herself, and "the wise" individual provides support particularly within the context of social interactions. As such, "the wise" acquire knowledge from and about the stigmatized individual regarding their stigma and related

experiences and may think of himself or herself as an honorary member of the stigmatized group (Goffman, 1963).

“The wise” can be categorized into two groups based on the nature of their relationship with a stigmatized individual. One category consists of people who have relationships with stigmatized individuals because their job requires them to provide care or support for them (e.g., social service providers) (Goffman, 1968). The other category consists of the family and friends of those stigmatized individuals (e.g., spouse, parent, child, or close friend). Altogether these relationships necessitate that “the wise” and the stigmatized spend time together and exchange information. Through their relationships with the stigmatized, “the wise” are able to obtain insider knowledge of the stigmatized group including experiences, attitudes, and behaviors of which outsiders may be unaware. This places “the wise” in a unique position between the stigmatized group and those who are not stigmatized, such that “the wise” can act within both realms, assist in stigma management, speak on behalf of the stigmatized, and facilitate social interactions. However, these interactions are not without their consequences. Goffman posits, “the wise” may find that they also bear the stigma of those with whom they closely interact (Goffman, 1963).

This begs the question, how might relationships with stigmatized individuals cognitively affect people who interact with them? This dissertation explores the cognitive consequences of relationships with offenders, one example of individuals from a stigmatized group, on non-criminal individuals who have direct relationships with them (e.g., family, friends, and parole officers), and indirect experiences with them (e.g., criminal justice students). In this dissertation, offender is defined as an individual who



has been arrested, convicted, and/or incarcerated. Moreover, for the purposes of this dissertation, criminal, is defined as the social group to which offenders belong. In other words, offenders make up the social group criminal. Additionally, criminal is also used to define the identity of those who identify or associate themselves as part of the group criminal.

Non-criminal individuals who engage in relationships with offenders have the ability to acquire knowledge related to *being a criminal* such as experiences, attitudes, behaviors, and the social and legal consequences of this label, despite not being an offender themselves. Consistent with Goffman's theory of stigma, those who directly and indirectly interact with offenders may view themselves differently with respect to the group, criminal, as a result of their relationships. In other words, do these classes of individuals see themselves as part of the group, criminal? If so, (1) how are these cognitions manifested implicitly, (2) how are these cognitions manifested explicitly, and (3) do these cognitions differ depending on direct or indirect contact (i.e., family, friend, parole officer, criminal justice student)?

This dissertation research takes an interdisciplinary approach to test if non-criminal individuals who have relationships with offenders exhibit an association between their self-concept (i.e., idea of oneself) and the group criminal by applying the social psychological theory of self-expansion (i.e., the inclusion of the other in the self). The self-expansion model asserts that in relationships where individuals are close (i.e., feel as if the other person is part of the self-concept or connected), and when people have frequent and positive experiences with others, they will incorporate the knowledge they have acquired in these relationships into their self-concept (Aron & Aron, 1986; Aron,

Aron & Smollan, 1992; Page-Gould, 2010a). When the relationship is positive, both individuals mutually include some aspects of the other into their self-concept. As a result of self-expansion, both individuals can vicariously develop resources (physical and social capital), cultivate new perspectives, and acquire new characteristics or identities related to the other, and incorporate them into their self-concept (Aron & Aron, 1986). In contrast, in negative and more distant relationships, self-expansion should not occur. Instead, negative relationships results in distancing and distinguishing the self from the other (Jones, Couch, and Scott, 1997). Self-expansion can affect both explicit (i.e., within one's conscious awareness or control) (Aron et al., 1992) and implicit (i.e., outside of conscious awareness or control) (Aron et al., 1991; Page-Gould et al., 2010a) associations.

The overarching goal of this dissertation is to test the extent to which non-criminal individuals who have relationships with offenders implicitly associate with the group criminal—one potential consequence of self-expansion in relationships with offenders. Implicit social cognition theory posits that past experiences can lead individuals to implicitly associate with new social groups. Across three studies, including two experimental studies, this dissertation research utilizes the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998; Karpinski & Steinman, 2006) to measure implicit associations with the group criminal. The IAT is a computerized reaction time task that measures the relative strength of two target groups (e.g., Self and Other) with the group criminal using response latency to operationalize association strength. Implicit measures were originally created to understand socially sensitive subjects, such as stereotyped attitudes, but have been adapted to understand a variety of socially sensitive

subjects, such as associations with stigmatized groups (Greenwald, Poehlman, Uhlmann, & Banaji, 2009a).

Research has established that people can implicitly associate the self-concept with the group criminal as a result of either a single event or repeated exposure to the criminal justice system (i.e., arrest, conviction, or incarceration) that they personally experienced (Rivera & Veysey, 2014, 2018; Veysey & Rivera, 2017). Applied to the present dissertation research, it is not a person's personal experiences in the criminal justice system that is expected to contribute to the mental association with the group criminal, but rather relationships with others who have had experiences in the criminal justice system.

Previous examinations of self-expansion have focused on positive acquired traits (e.g., skills, abilities, efforts) (e.g., traits; Aron et al., 1991) and ascribed traits (i.e., traits beyond one's control) (e.g., ethnicity; Page-Gould et al., 2010a) of others. This research demonstrates that close, frequent, and positive experiences with others results in self-expansion with positively acquired and ascribed traits. In the context of cross-group friendships, research has demonstrated that people can self-expand with a stigmatized ascribed group status, such as Latinx (Page-Gould et al., 2010a). Can people also self-expand with a stigmatized *acquired* group status, a status which is based on a person's experiences or actions rather than a status with which a person is born? Goffman (1968) argues that the thoughts and behaviors of "the wise" are influenced by relationships with stigmatized individuals (regardless of the nature of the stigma being acquired or ascribed). This suggests that people can, at least in theory, self-expand with a stigmatized acquired group. The present research extends self-expansion research and is the first

examination of self-expansion of the self with a stigmatized *acquired* group, that of criminal.

Across three experimental studies, this dissertation tests self-expansion and explores one consequence of self-expansion with offenders, the extent to which people implicitly associate their self-concept with the group criminal, among a unique sample of individuals that have various types of relationships with offenders. Study 1 will test the consequences of self-expansion within the context of friendships and familial relationships. Study 2 tests the implicit consequences of self-expansion among a sample of parole officers. Finally, Study 3 will test the consequences of self-expansion within the context of indirect experiences that criminal justice students have with offenders. Based on self-expansion and implicit social cognition theories, this dissertation will explore the following general research questions and related hypotheses:

1. *Do those who have direct relationships or indirect experiences with offenders exhibit implicit or explicit associations with the group, criminal?*

The primary goal of Study 1 is to establish self-expansion with the stigmatized acquired group status of criminal. Family and friends of offenders have the ability to feel close to offenders and can engage in frequent experiences with offenders both inside and outside the criminal justice system. For example, they may visit incarcerated loved ones, provide transportation to social services, or engage in everyday activities such as enjoying a meal together. As a byproduct of their relationship, family and friends of offenders may acquire knowledge about the criminal justice system and procedures and crime-related thoughts and behaviors. Similar to family and friends of offenders, parole officers (Study 2), have the ability to have close and frequent experiences with offenders,

as a result of their professional role rather than their personal relationships. Consistent with Goffman's conception of "the wise," parole officers can have experiences with offenders and gain knowledge about crime and criminality through their occupational function. Parole officers' sense of self may also self-expand because they frequently interact with parolees on a daily basis and may feel connected to parolees as they help them address criminogenic and non-criminogenic obstacles. Finally, Study 3 extends Study 2 and examines self-expansion within the context of indirect experiences that criminal justice students have with offenders. Through their classroom experiences, criminal justice students learn about crime and those who offend through topics such as the causes of crime, the consequences of crime, and reintegration. This allows students to develop new resources and acquire new perspectives, which may facilitate or hinder self-expansion with the group criminal. Related to the above mentioned research question and rationale, Studies 1 and 3 will test the following hypotheses:

*Hypothesis 1: Individuals who have (1) direct relationships or (2) indirect experiences with offenders are predicted to exhibit stronger implicit associations with the group criminal in comparison to those who do not.*

This is consistent with the basic tenet of implicit social cognition theory which maintains that past experiences can implicitly affect associations between the self and other social groups. Members of all groups in this dissertation are selected on the premise that they have either direct or indirect, close, frequent, and potentially positive experiences with offenders, and as a result of their past experiences should exhibit implicit associations with the group criminal. In addition, Studies 1 and 3 will examine explicit associations with the group criminal and will test the following hypothesis:

*Hypothesis 2: It is predicted that explicit associations with the group criminal will not differ between those who have (1) direct relationships or (2) indirect experiences with offenders and those who do not.*

People who have relationships with offenders may be unaware of the effects their experiences on their cognitions and are therefore unable to report them. Additionally, people may be motivated to explicitly minimize their associations with stigmatized groups due to social desirability concerns (Schnabel & Asendorpf, 2010).

Within relationships, people have various types of experiences with others (i.e., positive and negative). This is also true for relationships with offenders. Self-expansion theory highlights the importance of positive experiences in facilitating self-expansion. In contrast, negative experiences with people can result in distancing between the self and the other (Jones et al., 1997). By extension, experiences in relationships with offenders may impact the extent to which people self-expand, thereby impacting the extent to which people implicitly and explicitly associate with the group criminal. Relatedly, this dissertation will examine the following research question:

2. *What are the conditions under which implicit and explicit associations with the group criminal are strengthened versus attenuated?*

Friends and family members of offenders are in a unique position in which they have the potential to engage in either positive or negative experiences with offenders. On one hand they have the potential to assist offenders in providing economic, moral, and social support while on the other hand they have the ability to punish or isolate the offender. Theoretically, depending on the nature of the typical or predominant experience (i.e., positive or negative), they may be predicted to self-expand (as a result of positive

experiences) or not (as a result of negative experiences). Similar to this, parole officers, because of their occupational role, have the ability to either restrict and control offender behavior or to offer support and services, which may impact the types of experiences parole officers have with parolees, and this could potentially impact the extent to which parole officers self-expand with the group criminal. Based on these assumptions, Studies 1 and 2 will test the following hypothesis:

*Hypothesis 3: Among those who have relationships with offenders, people who are reminded of positive experiences with an offender are predicted to exhibit stronger implicit associations with the group criminal in comparison to those who are (1) reminded of negative experiences or (2) are not reminded of past experiences.*

Additionally, Study 1 will test the following hypothesis:

*Hypothesis 4: Among those who have relationships with offenders, it is predicted that explicit associations with the group criminal will not differ between those who are reminded of their positive experiences with an offender and those who are (1) reminded of negative experiences or (2) are not reminded of past experiences.*

Consistent with implicit social cognition theory, even though people have the ability to implicitly associate with a stigmatized group, they are likely to explicitly minimize their associations with the group due to social desirability motives (Devos & Banaji, 2003). Relatedly, Studies 1 and 3 will explore the following research question and related hypothesis:

3. *What is the relation between implicit and explicit measures of associations with the group, criminal?*

*Hypothesis 5: It is predicted that implicit and explicit associations will be weakly or not correlated for those who have (1) direct relationships or (2) indirect experiences with an offender.*

This is in line with implicit social cognition studies that have found low or no correlations between implicit and explicit associations particularly when they relate to socially sensitive subjects (Greenwald et al., 2009a). This suggests that explicit and implicit associations are independent or at least partially independent of each other.

The remainder of this dissertation is organized as follows. Chapter 2 details the theoretical framework of the dissertation focusing on implicit social cognition and self-expansion theories. Chapter 3 presents the general research questions, hypotheses, common measure. Chapter 4 presents Study 1 that will test the implicit and explicit consequences of self-expansion with offenders within the context of those who have personal relationships with offenders, specifically family members and friends. This study will examine factors related to the conditions under which self-expansion may occur such as the nature of the relationship, closeness, and the quality of a past experiences. Quality of past experiences with offenders will be manipulated using a writing task at the start of the study to make past experiences salient (i.e., at the forefront of one's memory). Participants will be randomly assigned to think and write about a positive or negative experience with an offender with whom they are close. The mechanism of self-expansion may have implications on relationship quality between close friends and family members and offenders (Aron, Norman, Aron, McKenna, & Heyman, 2000; Reissman, Aron, & Bergen, 1993).



Study 2, described in Chapter 5, will examine the implicit consequences of self-expansion within the context of the professional relationship parole officers have with offenders. This study will examine factors related to the conditions under which self-expansion may occur such as the professional characteristics of parole officers (e.g. professional orientation, identification with occupational role) and the quality of a past experiences. Similar to Study 1, parole officers will be randomly assigned to think and write about a past positive or negative experience with a parolee. Understanding the mechanism of self-expansion in the work setting of parole is important because it may have implications on the environment of parole by potentially improving relationships with clients (McIntyre, Mattingly, Lewandowski, & Simpson, 2014).

Study 3, presented in Chapter 6, will test the consequences of self-expansion on implicit and explicit associations with the group criminal and well-known group members (i.e., celebrities who have been convicted of a crime) within the context of indirect experiences with offenders using a sample of criminal justice and non-criminal justice students. Focusing on perceptions of criminal justice students is important, because they often become criminal justice practitioners and policy makers (Courtright, Mackey, & Packard, 2005; Courtright & Mackey, 2004). Therefore, the primary goal of Study 3 is to establish when self-expansion begins for future criminal justice actors. Does education play a role in facilitating self-expansion with the group criminal?

Chapter 7 will review and synthesize the findings from the series of studies and the implications of self-expansion for each sample. Chapter 8 will discuss limitations and describe policy and practice implications.

## **Chapter 2: Theoretical Framework**

The focus of this dissertation is the investigation of the consequences of interactions, and specifically, on-going relationships, with offenders on the implicit cognitions of non-criminal persons. Current criminological theories focus on the cognitive effects of criminal experiences and on cognitive changes that offenders undergo during desistance. However, offenders do not go through these experiences alone. Others within their social networks are both observers of these experiences and to some degree participants in the criminal justice system (e.g., family or friends' prison visitations). Criminal justice practitioners are also privy to these experiences due to their occupational role. Further, prior to becoming a practitioner, people may learn about these experiences during their academic training. The cognitive impact of these vicarious experiences in the criminal justice system on those who have direct relationships and indirect experiences with offenders is less well understood. To understand the cognitive consequences of relationships with offenders, this chapter first outlines how offenders come to associate themselves with the group criminal, using social identity, self-categorization, and implicit social cognition theories. Then, this dissertation applies self-expansion theory to explain the mechanism by which relationships with offenders may lead non-criminal persons to associate with the group, criminal.

### **Social Identity and Self-Categorization Theories**

Social identity theory (SIT) posits that people exhibit both personal and social identities. Personal identities are identities or traits which people use to describe themselves as individuals. For example, some people may see themselves as confident while other people may see themselves as nervous. Social identities, on the other hand,

represent people's knowledge of their membership in social groups (Tajfel & Turner, 1979, 1986). Social identities define individuals in terms of their similarities with other ingroup members (i.e., people from the same social groups) in contrast to outgroup members (i.e., people from other social groups) (Hogg & Turner, 1987). For example some people may categorize themselves as students and categorize others as teachers. According to SIT, social identities begin developing during childhood and emerge throughout the life-course. Identification with social groups can occur following a single experience and with limited contact with other ingroup members (Tajfel & Turner, 1979). Once formed, social identities can influence thoughts and behaviors (Cable & Welbourne, 1994).

Although people can identify with the social groups to which they belong, they vary in their subjective identification with each group. In other words, a person may consider some identities as more central or important to his/her self-concept (i.e., understanding of who they are) than other members of the same social group (Luhtanen & Crocker, 1992; Sellers, Rowley, Chavous, Shelton, & Smith, 1997). Moreover, social identification satisfies the basic human need to belong. Therefore, people can derive feelings of self-worth from their social identities, including those who belong to stigmatized groups (Baumeister & Learly, 1995; Boduszek & Hyland, 2011; Tajfel & Turner, 1986; Turner, 1975).

Extending SIT, self-categorization theory (SCT), posits that when people identify themselves with an ingroup, they will also associate themselves with the positive and negative stereotypes of the groups to which they belong (Hogg & Turner, 1987; Turner, 1985). Group identification is likely to impact people's thoughts and behaviors.

Specifically, when people identify with a social group, they are likely to behave in line with ingroup norms (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987).

In addition, SCT highlights the contexts in which identities guide thoughts and behaviors. A central idea of SCT is that people identify with multiple groups, and contexts influence which identities are most salient at a given point in time. When social identities become salient, people see themselves as representative of their ingroup (Hogg & Turner, 1987). Therefore, the extent to which people associate with the groups to which they belong changes, at least temporarily (Turner, Oakes, Haslam, McGarty; 1994). For example, a person may identify as a student and a criminal, but in contexts in which the criminal identity is made salient, such as filling out a job application, he/she may identify more with the group criminal. Moreover, some categorizations are more readily or chronically accessible due to their importance, value, and frequency of application to the self (e.g., gender, race) (Oakes, 1987). Other categorizations are only salient under specific circumstances (i.e., contextually accessible). In a given context, salient identities are those which are used to guide thoughts and behaviors (Gaither, Sommers, & Ambady, 2013; Rudman & Phelan, 2010).

**Criminal social identity.** Boduszek and colleagues applied SIT and SCT to understand how people come to associate their self-concept with the social group criminal (i.e., criminal identity; Boduszek & Hyland, 2011; Boduszek, Adamson, Shevlin, & Hyland, 2012). They assert that despite the negative status of the social group criminal, people can identify with the group and its related stereotypes. Similar to other social identities, identification with the group criminal can serve as a source of self-

worth. Moreover, identification with the group criminal can lead people to adopt group norms and behaviors (Boduszek & Hyland, 2011).

Research suggests that people can exhibit a criminal identity (Asencio, 2011; Asencio & Burke, 2011; Boduszek et al., 2012; Boduszek, Adamson, Shelvin, Mallett, & Hyland, 2013; Walters, 2003). In a study using a sample of Polish inmates, participants were asked to rate on a Likert-type scale (1= strongly disagree; 5= strongly agree) the extent to which they felt bonded to other criminals, the importance of a criminal identity to them, and their attitudes towards other criminals. Generally, inmates demonstrated moderate associations with a criminal identity (Boduszek et al., 2012). Moreover, criminal identity strength was positively correlated with the number of arrests (Boduszek et al., 2012) and the number of criminal friends inmates had prior to incarceration (Boduszek et al., 2013). In a longitudinal study, over the course of six months, newly incarcerated inmates exhibited an increase in criminal identity strength (Walters, 2003). Moreover, qualitative studies also demonstrate that people who were involved in criminal behavior noted identifying with a criminal identity (Bachman, Kerrison, Paternoster, O'Connell, & Smith, 2016; Brezina & Topalli, 2012; Feinstein, 2015; Little, 1990).

Taken together, these studies demonstrate people's associations with a criminal identity. They also suggest that criminal identity strength is related to experiences and behaviors related to being a criminal. Importantly, these studies demonstrate that people who have had personal experiences in the criminal justice system can explicitly (i.e., consciously) identify with the group, criminal. When individuals are able to reflect on their past criminal justice experiences and can acknowledge a criminal identity, this represents an explicit self and identity cognitive process (see Greenwald et al., 2002).

**Limitations of explicit measures.** The above review on SIT and SCT suggests that those who have had experiences in the criminal justice system will explicitly identify as a criminal. Notwithstanding the contributions of this research, these studies utilize self-report methods, which pose a number of limitations. Self-report methods rely on people's: 1) ability to introspect or report on particular beliefs and 2) willingness to report their beliefs, particularly those which are negatively perceived by society, such as a criminal identity (Schnabel & Asendorpf, 2010). Introspection is limiting because individuals may be unaware of the subtle ways in which their experiences in the criminal justice system shape their self-concept (Junger-Tas & Marshall, 1999). Also, because being a criminal is a stigmatized identity in that it can taint or devalue an individual, people may deny or conceal their associations with the group criminal (Goffman, 1963; Quinn, 2006).

To the extent that self-report methods exhibit the above limitations, they provide an incomplete understanding of the cognitive consequences of criminal justice experiences. To address these limitations, research has adopted theories and methodology of implicit social cognition (ISC) to understand how criminal justice experiences shape a criminal identity (Rivera & Veysey, 2014, 2018; Veysey & Rivera, 2017). See below for more detailed discussion.

### **Implicit Social Cognition Theory**

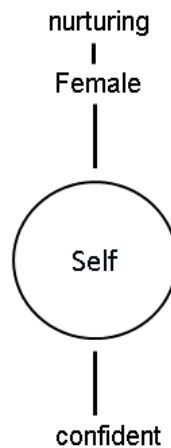
While SIT and SCT focus on explicit identities, implicit social cognition (ISC) theory maintains that identities can also develop implicitly, or outside of conscious awareness and control. ISC theories posit that cognitions are driven by two processes, an implicit and an explicit process. Implicit processes do not require motivational control

and are activated outside of conscious awareness. Explicit processes are subject to motivational control and occur within conscious awareness (Devos & Banaji, 2003; Gawronski & Payne, 2010; Greenwald & Banaji, 1995). Implicit and explicit processes are distinct yet related processes (Nosek & Smyth, 2007). That is, both processes access a common construct (e.g., criminal identity), but each process accesses a distinct form of the construct (e.g., implicit criminal identity and explicit criminal identity) (Nosek, Hawkins, Frazier, 2011).

A central assumption of ISC theories is that past experiences can have an automatic effect on the self-concept (Greenwald & Banaji, 1995). In other words, past experiences can influence the self, regardless of whether or not people explicitly acknowledge or are aware of the effects of their past experiences on their self-concept (Greenwald et al., 2009a). A single significant experience or repeated experiences can automatically influence the self-concept and affect an individual's thoughts, beliefs, attitudes, and identities. Past experiences can result in implicit associations, or links in memory, between two previously unrelated concepts, such as between the self-concept and a social group (e.g., criminal) (Greenwald & Banaji, 1995). Moreover, when a person implicitly identifies with a new social group, they also implicitly associate with the stereotypes of the group and apply them to their self-concept (Greenwald et al., 2002).

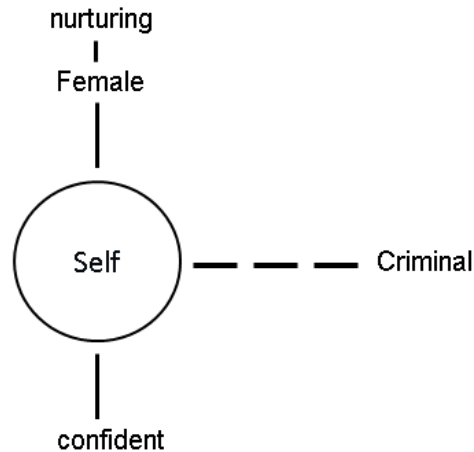
The self-concept can be thought of as a network of associations which is comprised of links between a node, which represents the self, and nodes which represent traits and social groups related to the self (Greenwald & Banaji, 1995; Greenwald et al., 2002). An example of this is displayed in Figure 1A. In the center is the self-concept. Lines extending from the self-concept represent associations between the self and related

social groups and traits (as demonstrated in Figure 1A with the group ‘Female’ and the group related trait ‘nurturing’ and the personal trait ‘confident’). When a person has a new experience, a new link is made between the self and a previously unrelated concept, such as a new social group. For example, when a person has an experience in the criminal justice system, an implicit association is formed between the self and the social group criminal. This is displayed in Figure 1B. The new association between the social group ‘Criminal’ and the self-concept is represented by a dashed line. This is referred to as an implicit criminal identity. An implicit criminal identity is established regardless of whether or not individuals are aware of their association with the group criminal and/or are willing to acknowledge their association with the group criminal.



*Figure 1A.* Network of associations between the self, social groups, and attributes related to the self.





*Figure 1B.* Network of associations following a personal experience in the criminal justice system.

**The relation between implicit and explicit cognitions.** ISC posits that implicit and explicit cognitions are derived from distinct processes and therefore measures of implicit and explicit cognitions are unrelated (Greenwald & Banaji, 1995; Greenwald et al., 2009a; Greenwald et al., 2002; Nosek et al., 2011). Self-report measures, which capture explicit cognitions, allow individuals to control their responses and apply self-presentation motives. Therefore, some information captured using self-report measures may not be accurate due to self-presentation concerns. In addition, explicit measures are based on information that is accessible to the individual. In contrast, measures which capture implicit cognitions do not provide individuals with the opportunity to engage in self-presentation motives (Karpinski & Steinman, 2006; Nosek et al., 2011). In addition, implicit measures can capture cognitions that may not be accessible through self-report measures (i.e., cognitions individuals are unaware of). Implicit measures assess cognitions indirectly, in that they do not require asking participants to report on their beliefs, thoughts, or attitudes (Teige-Mocigemba, Klauer, & Sherman, 2010). Implicit cognitions are assessed by examining behaviors that are not easily controlled by individuals, such as response latencies. In a meta-analysis examining the correlation

between measures of implicit and explicit cognitions of socially sensitive subjects (e.g., racial attitudes, self-esteem) the correlation between implicit and explicit measures was found to be low or non-existent (Greenwald et. al., 2009; Hofmann, Gawronski, Gschwender, Le, & Schmitt, 2005).

**The Implicit Association Test (IAT).** One common measure of implicit social cognition is the Implicit Association Test (IAT; Greenwald et al., 1998). The IAT uses reaction times to operationalize the strength of implicit associations between social groups (e.g., White/Black) and attributes (e.g., good/bad) that fall outside of conscious awareness. The IAT was initially established to measure automatic associations between stereotyped attitudes (e.g., racism; Greenwald et al., 1998). Meta-analyses demonstrate that IAT scores showed higher levels of stereotyping and prejudice than explicit measures (Greenwald et al., 2009a).

The IAT has displayed good internal consistency (Dasgupta & Greenwald, 2001) and is less susceptible to deception than explicit measures (Asendorpf, Banse, & Mucke, 2002; Banse, Seise, & Zerbes, 2001; Egloff & Schmukle, 2002; Do-Yeong, 2003). For instance, in Asendorpf and colleague's (2001) study when participants were instructed to present themselves as not shy, participants exhibited a decrease in self-ratings of shyness. However, IAT shyness scores did not change. Similar results were found when participants were instructed to fake positive attitudes towards gay men and racial groups (Banse et al., 2001; Do-Yeong, 2003). Moreover, in the context of stereotyped attitudes, IAT scores were found to be predictive of behaviors such as voting decisions (Greenwald, Smith, Sriram, Bar-Anan, & Nosek, 2009b), hiring practices (Rooth, 2010), and intergroup interactions (Amodio & Devine, 2006). For example, in the domain of

intergroup interactions, Amodio and Devine (2006) used an IAT which measured implicit attitudes towards the groups White and Black and found that performance on the IAT was predictive of seating distance from a Black target (Amodio & Devine, 2006). Moreover, meta-analyses demonstrate that implicit stereotyped attitudes are more predictive of behavioral outcomes related to discrimination (e.g., length of conversation, facial expressions) than explicit measures of stereotyped attitudes (Greenwald et al., 2009a; Kurdi et al., 2018).

**Self-related implicit associations.** More relevant to this dissertation, ISC theory and the IAT have been utilized to understand associations between the self-concept and related groups and attributes (e.g., criminal) (Rivera & Veysey 2014, 2018; Veysey & Rivera, 2017; also see Devos & Banaji, 2003). Studies have used the IAT to measure automatic associations between the self-concept and groups such as victim (Rosen, Milich, & Harris, 2007), criminal (Rivera & Veysey, 2014, 2018; Veysey & Rivera, 2017), and traits such as shy (Asendorpf et al., 2002), aggressive (Uhlmann & Swanson, 2004), masculine, feminine, and self-esteem (Greenwald & Farnham, 2000).

While implicit cognitions may represent enduring individual differences (i.e., characteristics) they are also likely to be dependent on context. Several studies have explored the effects of situational factors on implicit self-related cognitions (Devos, Viera, Diaz, & Dunn, 2007; Haines & Kray, 2005; Uhlmann & Swanson, 2004). For example, Uhlmann and Swanson (2004) measured implicit and explicit associations between the self and the trait aggressive after participants played either a violent video game or completed a puzzle. Participants who played the violent video game exhibited stronger implicit associations between the self and the trait aggressive than participants

who worked on a puzzle. Moreover, they did not find differences in explicit associations between the self and aggression between participants (Uhlmann & Swanson, 2004).

Haines and Kray (2005) also found that manipulating social roles impacts implicit associations. In their study, female participants who were assigned to powerful roles (i.e., group leader or recruiter roles) exhibited stronger implicit associations between the self and the trait powerful and self and masculine traits in contrast to participants who were assigned to less powerful roles (i.e., inferior group member, applicant role). However, role assignment did not affect explicit associations between self and the trait powerful or other masculine traits (Haines & Kray, 2005). Moreover, manipulating contexts within tasks has also been found to affect implicit self-related associations. Using a Go/No-Go Task (see Chapter 4 for further discussion on the Go/No-Go Task), Devos and colleagues (2007), manipulated the background of the task to show pictures related to either motherhood, college, or neither (i.e., neutral background). Female participants who were assigned to either the college or neutral background conditions exhibited stronger associations between the self and college than participants who took the task with the motherhood related background. Similar to the above mentioned studies, explicit associations between the self and college were not affected by the background condition (Devos et al., 2007). Taken together these studies suggest that contexts can affect implicit self-related cognitions, at least temporarily. That is, contexts can make associations between the self-concept and related groups or traits temporarily accessible. Moreover, this demonstrates the malleability of implicit cognitions. In contrast, contexts appear to have little impact on explicit self-related cognitions.

Similar to research on implicit stereotyped attitudes, implicit associations between the self and related social groups and traits, are more predictive of behavioral outcomes than explicit associations between the self and related social groups and traits (Kurdi et al., 2018). For example, Nock and colleagues (2010) demonstrated that implicit association strength between the self-concept and death, predicted future suicide at a six fold increase, above and beyond explicit associations between self and death, suicide attempt history, suicide related risk factors (i.e., depression), and patient and clinicians predictions of future suicide attempts. Several studies have demonstrated similar findings such that implicit self-related cognitions have been found to be more predictive than explicit self-related cognitions for a host of outcomes including anxious behavior (Egloff & Schmukle, 2002), aggression (Richetin, Richardson, & Mason, 2010), performance on math assessments (Nosek, Banaji, & Greenwald, 2002), mental health (Schroder-Abe, Rudolph, & Schutz, 2007), weight loss (Carels et al., 2011), moral behaviors (Perugini & Leone, 2009), and criminal behavior (Rivera & Veysey, 2018). Implicit measures may be more predictive of behaviors and outcomes than explicit measures potentially due to the socially sensitive nature of subjects. That is, in socially sensitive domains, people may be motivated to respond in socially desirable ways and may engage in impression management which influences self-report responses. In contrast, implicit tasks are less susceptible to social desirability concerns (Teige-Mocigemba et al., 2010). Indeed social sensitivity of the subject was found to have a moderating effect on explicit measures and behavioral outcomes (Greenwald et al., 2009a).

Some research suggests that explicit measures are associated with controlled behaviors whereas implicit measures are associated with less controlled behaviors

(Asendorpf et al., 2002; Egloff & Schmukle, 2002). For example, in a study examining associations between the self-concept and the trait shy, explicit ratings of shyness were predictive of controlled shyness related behaviors such as speech, whereas IAT shyness scores were predictive of spontaneous shyness related behaviors such as facial expressions and body language (Asendorpf et al., 2002). However, other studies suggest that implicit associations can also predict controlled behaviors such as enrollment intentions in math classes (Steffens, Jelenec, & Noack, 2010) and career aspirations (Asgari, Dasgupta, & Stout, 2012). This suggests that implicit cognitions may influence any type of behavior regardless of its controllability (Kurdi et al., 2019). It is important to note that both implicit and explicit measures are valid measures of cognitions and predict behaviors. However they may do so to varying extents (Greenwald & Nosek, 2008).

Importantly, Gschwendner and colleagues (2008) demonstrated that implicit and explicit measures can predict behaviors only when the measures correspond with the behavior of interest. In their study, they explored the correspondence between three different implicit measures of anxiety and their corresponding explicit measures. They first measured implicit and explicit associations between the self and general anxiety, speech related anxiety, and spider related anxiety. Then they measured behavioral indicators of anxiety while participants delivered a speech (e.g., overall impression, stammering, eye contact, speech duration). They found that implicit and explicit speech anxiety scores predicted anxiety related behaviors during the speech. Implicit and explicit general anxiety and spider related anxiety scores did not predict anxiety related behaviors during the speech. They demonstrate that implicit and explicit measures are predictive of

behaviors only when the measures correspond with the expected outcomes (Gschwendner, Hofmann, & Schmitt, 2008).

**Implicit criminal identity.** To date, there are three known studies that have focused on implicit criminal identity, that is the implicit association between the self and the group criminal (Rivera & Veysey, 2014; 2018; Veysey & Rivera, 2017). To measure implicit criminal identity strength, the authors developed and employed an IAT. The IAT measured how fast participants responded when words related to self were simultaneously paired with words related to criminal. Participants who reported having an experience in the criminal justice system (i.e., arrest, conviction, and/or incarceration) exhibited an implicit criminal identity (Rivera & Veysey, 2014; 2018; Veysey & Rivera, 2017). Further, participants who reported having an experience in the criminal justice system exhibited stronger implicit criminal identity strength, in comparison to those who did not have any experiences in the criminal justice system (Veysey & Rivera, 2017).

In these studies, explicit criminal identity was measured using a self-report questionnaire in which participants were asked to indicate the extent to which they associated words related to the group criminal on a Likert-type scale (0= not at all characteristic of me; 7= very characteristic of me). Participants with experiences in the criminal justice system did in fact exhibit an explicit criminal identity. Moreover, participant demographic factors were related to explicit identity strength. Specifically, female participants exhibited weaker explicit criminal identity strength in comparison to men (Rivera & Veysey, 2014) and older participants exhibited weaker explicit criminal identity strength in comparison to younger participants (Veysey & Rivera, 2017). Despite exhibiting weaker explicit criminal identity strength, female participants

exhibited similar implicit criminal identity strength to men (Rivera & Veysey, 2014) and older participants exhibited stronger implicit criminal identity strength in comparison to their younger counterparts (Veysey & Rivera, 2017). This is consistent with ISC theory which suggests that while identities may be represented in memory, people may be motivated to minimize their associations, particularly as it relates to socially sensitive subjects. Moreover, these individuals may be unaware of the extent to which their experiences in the criminal justice system affect their self-concept. Also consistent with ISC theory, across all three studies, there was no correlation between implicit and explicit criminal identity (Rivera & Veysey, 2014; 2018; Veysey & Rivera, 2017). Moreover, the authors found that implicit criminal identity strength was more predictive of criminal behavior above and beyond explicit criminal identity strength and demographic factors (Rivera & Veysey, 2018). These studies underscore the importance of examining both implicit and explicit cognitions in understanding associations with stigmatized groups.

### **The Role of Others in Changing a Criminal Identity**

Identities are not stable and can change over the life course (Ebaugh, 1988). This may occur when an identity is no longer relevant to a person's present life situation or is inconsistent with who they perceive themselves to be (Burke & Cast, 1997; Ebaugh, 1988). In line with this, criminological theories of desistance assert that when an individual is working to stop his/her criminal behavior, he/she may shed or transform his/her identity from that of a criminal to non-criminal. Criminological theories of desistance highlight the important role of pro-social others (i.e., positive non-criminal others) in supporting offender change (Giordano, Cernkovich, & Rudolph, 2002;



Giordano, Schroeder, & Cernkovich, 2007; Laub & Sampson, 2003; Maruna, 2001; Sampson & Laub, 1993).

Sampson and Laub's (1993; Laub & Sampson, 2003) age-graded theory centers around the importance of life transitions, or events that result in changes in state (e.g., a good quality marriage, stable employment) in changing criminal behavior. According to their theory, life transitions are dependent on the strength of bonds with pro-social others, which serve as a source of informal social control. Although they acknowledge that life transitions can include identity transformations, they maintain that cognitive/ identity shifts are not necessary for desistance (Laub & Sampson, 2003).

In contrast, Giordano and colleagues (Giordano et al., 2002, 2007) and Maruna (2001) posit that cognitive/identity shifts are necessary for long-term desistance to occur. They suggest that relationships with pro-social others can support and sustain offender identity change (Farrall & Maruna, 2004; Giordano, et al., 2002, 2007; Maruna, 2001, 2004; Maruna & Roy, 2007). Relationships with pro-social others can exist within formal organizations (e.g., treatment, religion) and intimate networks (e.g., partners, friends, children) (Giordano et al., 2002; Maruna, 2001). Pro-social others serve as role models from whom criminals can adopt new perspectives, attitudes, behaviors, and characteristics (Giordano et al., 2007). These relationships provide the necessary contexts for offenders to transform or shift their criminal identity to a pro-social identity (Giordano et al., 2002, 2007; Maruna, 2001).

Taken together, the above mentioned theories of desistance demonstrate the positive impact pro-social others have on offenders in their transition and identity change process. However, these theories assume the effects of the relationships between pro-

social others and offenders is unidirectional. This begs the question, if pro-social others can have such a profound impact on the cognitions of offenders, can offenders then also impact the cognitions pro-social others?

Goffman (1963) posits that the relationship between a stigmatized individual, such as an offender, and pro-social others, impacts both individuals. In such relationships where the offender and pro-social other spend time together, the offender shares information about himself or herself, and the pro-social individual provides support particularly within the context of social interactions. Therefore, pro-social others who have relationships with offenders have the ability to acquire knowledge about being an offender, related experiences, attitudes, and behaviors, and may serve as a source of support.

Also, as a result of their relationship, they may also find that they are also stigmatized and treated as offenders. Although the focus of the criminal justice system is the offender, people who have relationships with offenders, such as non-criminal family and friends may have encounters with the criminal justice system themselves. They may find that they are being supervised or controlled by the criminal justice system (Comfort, 2007). For example, they may be present during an arrest or court proceeding, may be subject to strict rules when visiting an inmate, or their belongings may be subject to search (Comfort, 2003, 2007; Fishman, 1988; Girschick, 1996). In these ways, people who have not been arrested, convicted and/or incarcerated may also feel stigmatized.

In addition, relationships between the offenders and pro-social others may have positive consequences. Research suggests that the exchange of support between the offender and friends and family, is bidirectional. In other words not only do friends and

families support offenders, but also offenders can support these individuals. For example, offenders can provide emotional, informational, physical, and financial support to family and friends. Moreover, friends and family members are capable of recognizing and receiving the support from the offender (Martinez & Christian, 2009).

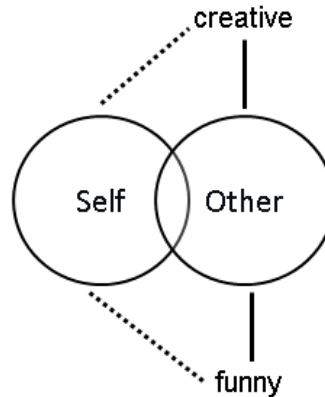
In summary, research suggests that those in relationships with offenders can also experience changes, some of which may be cognitive. Cognitive changes may occur through a process similar to the concept of role-taking outlined by Giordano and colleagues (2002, 2007), which suggests that offenders change through the process of taking the perspective of pro-social others in which they are able to gain the resources (e.g., cognitions, thoughts, behaviors) that they have to offer. Similar to this process, pro-social others may also take the perspective of the offender and gain their resources (e.g., perspective taking, social and physical capital). However, the mechanism for this is not addressed by current criminological theories. To examine one potential mechanism which may facilitate cognitive changes in pro-social others, this dissertation applies and tests the social psychological theory of self-expansion.

### **Foundations of Self-Expansion Theory**

In social psychology, self-expansion is the idea that people are motivated to expand their self-concept to include others to whom they are close and with whom they engage in frequent and positive experiences (Aron & Aron, 1986; Aron & Aron, 1996; Aron, Aron, Tudor, & Nelson, 1991). When people self-expand, they mutually include some aspects of the other person (e.g., traits and groups) into their self-concept (Aron & Aron, 1986; Aron & Aron, 1996; Fraley & Aron, 2004). People are motivated to self-expand to enhance their personal growth, progress, and self-efficacy (Aron & Aron,

1996). When self-expansion occurs, people can take on the resources (physical and social capital) of each other, cultivate new perspectives, and acquire new characteristics or identities (Aron & Aron, 1986; Aron & Aron, 1996; Fraley & Aron, 2004). Indeed, empirical evidence has demonstrated that when another person is perceived as a part of the self, the allocation of resources is shared (Clark & Mills, 1979), perspective differences are decreased (Brenner, 1973), and characteristics of others are perceived as one's own (Tesser, Millar, & Moore, 1988).

Self-expansion theory was first applied within the context of romantic relationships (Aron et al., 1991; Aron et al., 1992; Slotter & Gardner, 2009; Slotter & Gardner, 2012). In a romantic relationship where people spend time with each other, engage in positive experiences with each other, and become close to each other, both individuals will self-expand. For instance, when a person includes their significant other into his/her self-concept, he/she may begin to think of, or associate with, the traits of his/her significant other. This may be attributed to the cognitive overlap that forms between the self-concept and the other person, which is exemplified in Figure 2. On the left side of the figure is the self-concept and on the right is a close other and his/her related traits. When self-expansion occurs, a cognitive overlap occurs between the self and the close other. As a result of self-expansion, the self can also associate with the traits related to the close other (as demonstrated by two dotted lines extending from the self to the traits 'creative' and 'funny').



*Figure 2.* Self-expansion of the self with a close other and the traits of the close other.

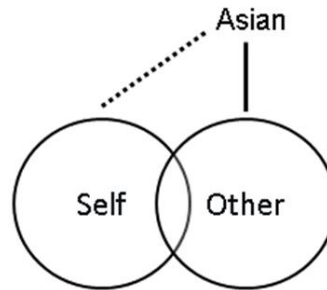
In romantic relationships, self-expansion can influence both explicit and implicit cognitions (Aron et al., 1991; Aron et al., 1992; Slotter & Gardner, 2009; Slotter & Gardner, 2012). Aron, Aron, and Smollan (1992) demonstrated that married couples were capable of explicitly articulating their associations with their spouse using the Inclusion of the Other in the Self (IOS) scale. The IOS scale is a self-report measure of self-expansion in which participants indicate how close they feel to another person by selecting one of seven pairs of circles that represent varying degrees of overlap between the self and the other. In another study which utilized the IOS scale, self-expansion was moderately correlated with the proportion of first person plural pronouns (e.g., “we” and “us”) that participants used. That is, the closer participants felt to their partner, the more they used terms that reflected an association between themselves and their partners (Agnew et al., 1998). In a longitudinal study Aron, Paris, and Aron (1995) used changes in self-descriptions over time to measure self-expansion. Participants were asked five times over the course of ten weeks, “Who are you today?” and were given three minutes to write as many self-descriptive words or phrases as possible. Over the course of the ten week period, participants who entered a romantic relationship exhibited an increase in the number of self-descriptions, suggesting that these participants experienced self-

expansion. This increase was found within participants who had entered into romantic relationships and when compared to participants who had not entered into romantic relationships (Aron, Paris, & Aron, 1995). Taken together, these studies demonstrate that people in romantic relationships can expand their self-concept to include their partners. Moreover, these studies provide evidence that self-expansion in romantic relationships affects explicit cognitions.

Several studies have demonstrated how romantic relationships can affect implicit cognitions as well, using a “me/not me” reaction time procedure (Aron et al., 1991; Aron et al., 2001). The “me/not-me” procedure is based on the idea that the degree to which the self and the other are associated is reflected in reaction times when characterizing traits as self-descriptive. In other words, faster reaction times are exhibited when traits are similar between self and other, in comparison to when traits are not similar between self and other. This slower processing is argued to arise from the confusion between self and the close other, because the other is part of the self in close relationships, when evaluating traits related to self, traits related to spouse are also evaluated. Consistent with this, studies have demonstrated that participants exhibited faster reaction times to traits that were similar between themselves and their spouse than when traits were different (Aron et al., 1991; Aron et al., 2001). Smith, Coats, and Walling (1999) used a similar reaction time procedure in which participants were instructed to indicate whether or not traits were related to themselves or a romantic partner by pressing either a “yes” or “no” key. Participants responded faster when affirming a trait that was relevant to their partner and themselves in comparison to traits that were different between their partner and

themselves (Smith et al., 1999). These studies demonstrate that romantic relationships impact implicit cognitions.

**Self-expansion in cross-group relationships.** In addition to its application in romantic relationships, self-expansion has been applied to understand the influence of cross-group friendships (e.g., Latinx and White friendships) on the self-concept (Page-Gould et al., 2010a, 2010b). This line of research suggests that people are motivated to expand not only with close others and their traits, but also with the social groups and related attributes to which close others belong. For self-expansion to occur in cross-group relationships, a person must first enter into a relationship with a member of a different social group. Both individuals have the ability to engage in positive and frequent experiences with each other and feel close to each other. This results in the association between the self and the close other's social group and its related attributes (Aron et al., 2001; Coats et al., 2000; Page-Gould et al., 2010a). For example, a person has the ability to associate with a friend's ethnic group even if he/she she is not physically a part of the group. He/she may acquire knowledge about the ethnic group's culture and may even participate in events or activities unique to the group. As a result, a psychological connection is made, such that events that impact the ethnic group, now take on a personal meaning and may impact the individual as well. This demonstrates that a person can psychologically include a friend's social group into their self-concept, despite not being an actual group member. This is exemplified in Figure 3, which demonstrates self-expansion in a cross-group friendship. As a result of the cognitive overlap between the self and other, the self can also associate with the ethnicity of the other person, which is represented with a dotted line between the self and the group 'Asian'.



*Figure 3.* Self-expansion of the self with a close other and the social group of the close other.

Page-Gould and colleagues (2010a) demonstrated that people can implicitly and explicitly associate with a cross-group friend's ethnic group (e.g. Latinx, White, and American Indian). Participants were asked to indicate the ethnicity of a close cross-group friend and how close they felt to the friend. Then, using a self-report measure, participants were asked to indicate the extent to which they identified with their cross-group friend's ethnic group. Finally, participants completed the "me/not-me" reaction time task (described above) to measure implicit associations with their cross-group friend's ethnic group and related traits. They found that explicit associations with a cross-group friend's ethnic group were correlated with feelings of closeness. In other words, the closer participants felt to their friend, the stronger they explicitly identified with the cross-group friend's ethnicity. Moreover on the "me/not-me" procedure, participants took longer to categorize a friend's ethnic group as not self-descriptive. In addition, the closer participants felt to the cross-group friend, the longer they took to categorize their friend's ethnicity as not self-descriptive. Finally, participants exhibited faster reaction times when categorizing traits that were similar between self and a cross-group friend's ethnic group in comparison to traits that were not similar between self and a cross-group friend's ethnic group (Page-Gould et al., 2010a).



This study demonstrates that people can explicitly and implicitly associate with a cross-group friend's ethnic group and the attributes related to the group. Importantly, this study highlights that people can associate and identify with negatively perceived groups, such as Latinx and related attributes (Fairchild & Cozens, 1981; Neimann, 2001). In the study, participants did not differ in implicit or explicit associations with racial groups because of the perceived status of the group. In other words, participants who had a close cross-group friend exhibited similar implicit and explicit association strength with the cross-group friend's ethnic group, regardless of their cross-group friend's ethnicity. Moreover, reaction times to stereotypical traits of each ethnic group were not moderated by whether the traits were positive or negative in valence (Page-Gould et al., 2010a). These findings are consistent with past work on self-stereotyping that demonstrates that people will adopt the stereotypes of their groups, even if they are negative (Hogg & Turner, 1987; Sinclair & Huntsinger, 2006).

**Self-expansion in friendships.** Research has also demonstrated that self-expansion need not occur only in the context of cross-group relationships, but can occur in relationships where the close other is perceived as being different from the self. McLaughlin-Volpe and Wright (2002) examined self-expansion within the context of newly formed friendships. Four times throughout a six week period, participants were asked to indicate whether they had developed a close friendship and provide self-descriptions. Participants who reported developing a close friendship were also asked to report how close they felt to their friend and rate the ways in which they felt they were different from their friend. Participants who developed a friendship with someone who they perceived as being different from themselves, were more likely to exhibit an

increase in self-descriptions at each testing session, which may serve as an indicator of self-expansion. In other words, self-expansion was more likely to occur in friendships where the other was perceived as being different from the self. This study suggests that friendships with people who are different, rather than similar to the self, can result in self-expansion. This may be because people who are different from the self can provide the self with unique resources, perspectives, and characteristics that the self does not already possess (McLaughlin-Volpe & Wright, 2002).

**Prerequisites of self-expansion in friendships.** Self-expansion theory states that in close relationships, where people engage in positive and frequent experiences with close others, self-expansion will occur. However, some evidence suggests that self-expansion does not occur in all relationships which meet these prerequisites. Rather, self-expansion may be more likely to occur within certain types of relationships. For example, Mashek, Aron, and Boncimino (2003) examined self-expansion within the context of various types of relationships (e.g. romantic partners, parents and children) and demonstrated that self-expansion is dependent on closeness, rather than familiarity or similarity. Using a reaction time task, they found that participants exhibited stronger associations between traits that were similar between themselves and either a best friend or a romantic partner, in comparison to traits that were similar between themselves and a parent or a famous individual whom participants knew. In other words, people exhibited stronger associations between themselves and less familiar but close others than between themselves and more familiar but less close others. For instance, a person may be familiar with his or her parents, but may not necessarily feel close to them in the way he or she may be with a best friend or a romantic partner. Further, associations between the self

and the other were not due to perceived similarity to the other (Mashek et al., 2003). This suggests that closeness is an important prerequisite for self-expansion, rather than familiarity or similarity.

In line with the prerequisites of self-expansion, experiences have also been found to be related to the extent to which people self-expand. In a study conducted by Aron and colleagues (1997), participants were randomly paired with a stranger and were assigned to complete either a task which involved self-disclosure and relationship building skills or to engage in small-talk. Upon completing the task, participants completed the IOS Scale (described above). Participants who completed the self-disclosure and relationship building task exhibited greater self-expansion in comparison to participants who engaged in small talk (Aron et al., 1997). In another study, Fraley and Aron (2004) demonstrated that positive experiences were related to self-expansion. Participants were randomly paired with a stranger and were assigned to participate in either a positive interaction task (i.e., a shared experience that would make participants laugh together) or not (i.e., a serious task). Upon completing the task, participants then completed the IOS Scale. Participants who completed the positive interaction task exhibited greater self-expansion in comparison to participants who did not (Fraley & Aron, 2004). Taken together, these studies demonstrate that self-expansion is related to experiences which provide people with opportunities to incorporate new perspectives and resources into their self-concept.

Relatedly, positive emotions may serve as an indicator of positive experiences, therefore, individuals who experience positive emotions may also exhibit self-expansion. In a study examining undergraduate roommates over a five week period, positive emotions were found to be positively correlated with self-expansion between participants

and their roommates. In contrast, negative emotions, were negatively correlated with self-expansion. Finally, participants who exhibited a higher ratio of positive to negative emotions experienced a greater degree of self-expansion in comparison to those who did not (Waugh & Fredrickson, 2006). This study suggests that frequency alone does not facilitate self-expansion, but rather the types of experiences between people can facilitate self-expansion. Altogether the above research provides evidence of the role of the basic prerequisites of self-expansion, such that relationships in which people are close with each other, and engage in positive and frequent experiences with each other self-expansion is likely to occur. Such relationships provide people with the opportunity to grow and expand their sense of self by cultivating new perspectives, acquiring resources and characteristics.

**Salient memories and self-expansion.** In relationships, people have countless memories of their experiences with the others, but not all memories are accessible simultaneously. Only salient memories are those which are used to guide cognitions. Memories are activated based on the contextual cues in which the self is placed (Andersen & Chen, 2002; Linville & Carlston, 1994; Markus & Wurf, 1987; Turner et al., 1987). The activation of a particular memory also activates any concepts related to the memory (Greenwald et al., 2002). For example, when people encounter someone new who is similar to a close other, the memory of the close other is activated as well as the close other's characteristics including those not embodied by the new person (Andersen & Chen, 2002).

Research has illustrated that salient memories of a close other can activate self-expansion. Page-Gould and colleagues (2010a) asked participants who previously

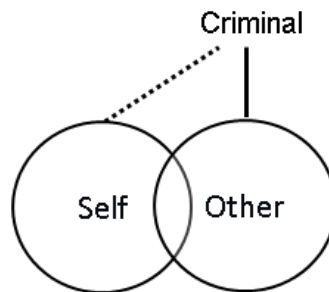
indicated having a close cross-group friend, to describe either a cross-group friend or a same-group friend (depending on the condition to which the participants were assigned). Participants then completed a measure of self-expansion with a friend's ethnic group using a "me/not-me" task. Participants who described their cross-group friend at the start of the study took longer to categorize their cross-group friend's ethnicity as not self-descriptive (Page-Gould et al., 2010a). All participants had a cross-group friend, but only participants who were reminded of their cross-group friend exhibited self-expansion with their cross-group friend's ethnic group. This demonstrates that salient memories influence the extent to which people exhibit self-expansion.

### **Self-Expansion with the Social Group Criminal**

This dissertation differs from and builds upon existing self-expansion research in several important ways. First, examinations of self-expansion have focused on positive acquired traits (e.g., energetic; Aron et al., 1991) and ascribed traits (e.g., ethnicity; Page-Gould et al., 2010a). This dissertation extends self-expansion research and examines self-expansion with a stigmatized acquired group status, that of criminal. Self-expansion in the context of cross-group friendships has demonstrated that people can associate with negatively ascribed traits (i.e., Latinx) and negative traits related to a close other's social group, to which the self does not belong (Page-Gould et al., 2010a). This reflects that regardless of the valence of a social group, people have the ability to self-expand in close relationships. Moreover, Goffman (1963) suggests that people in relationships with stigmatized individuals, regardless of the stigma being acquired or ascribed, can still be cognitively affected.

Therefore, it stands to reason that similar to the mechanism of self-expansion with negative ascribed traits, people who have relationships with offenders may self-expand and associate the self with the group criminal. In these relationships, people have the ability to form close and positive relationships with an offender. Moreover, consistent with the notion of the bi-directionality of relationships between offenders and pro-social others, similar to the way in which offenders can acquire resources, perspectives, and identities from pro-social others, pro-social others may also have the ability to acquire the resources, perspectives, and identities provided by offenders. This may potentially be due to the cognitive overlap between the self and the other that occurs during self-expansion.

Thus, one potential consequence of self-expansion with an offender is the unconscious association between the self-concept and the group criminal, referred to throughout this dissertation as *implicit criminal-self associations*. Figure 4 demonstrates self-expansion with an offender. Theoretically, an individual who has a relationship with an offender will exhibit a cognitive overlap between the self and the offender in terms of social identity (and characteristics/attributes) of the group. Consequently, the self can associate with the group 'Criminal' (represented with a dotted line), despite not being an offender themselves.



*Figure 4.* Self-expansion of the (non-criminal) self with the group criminal.

Implicit criminal-self associations may provide a different understanding of the cognitive consequences of relationships with offenders in comparison to *explicit criminal-self associations* (i.e., the conscious association between the self and the group criminal). Due to the negatively perceived status of the group criminal, people who have relationships with offenders may be unwilling to acknowledge their associations with the group criminal or may not recognize the effects of their relationships on their cognitions. Therefore studying implicit cognitions may provide a more comprehensive understanding of the cognitive consequences of self-expansion with offenders than explicit cognitions alone.

This dissertation focuses on the cognitive consequences of self-expansion across three types of relationships that people have with offenders. First, similar to previous self-expansion research, Study 1 will examine self-expansion within the context of personal relationships with offenders (i.e., family and friends). These individuals can engage in positive and frequent experiences with offenders inside and outside of the criminal justice system. For example, they may accompany an offender to court proceedings or meetings with community corrections officers. Outside of the criminal justice system they may engage in everyday activities with an offender, such as enjoying a meal together. During these various types of interactions, those who have personal relationships with offenders acquire knowledge about the criminal justice system and procedures, and the perspectives, thoughts, and behaviors related to being an offender. Such opportunities provide knowledge and new perspectives, which may facilitate self-expansion. Theoretically, depending on the nature of the predominant type of experience

in this relationship (i.e., positive vs. negative), those who have personal relationships with offenders are predicted to self-expand.

Study 2 extends self-expansion research and examines self-expansion within the context of the professional relationship between parole officers and parolees. This is squarely in line with Goffman's conception of "the wise," insofar as the role of the parole officer requires that he/she provide resources and support to those whom they supervise. This may have cognitive consequences. The role of the parole officer provides them with the opportunity to gain new perspectives from those whom they supervise. They may gain knowledge about offending and related behavior, thoughts, and attitudes. Moreover, parole officers frequently interact with parolees and may develop a connection with particular individuals as they help them address criminogenic and non-criminogenic obstacles. The role of the parole officer provides them with the ability to engage in positive or negative experiences with parolees. Therefore, parole officers may also have the ability to self-expand with the group criminal.

Finally, this dissertation extends current self-expansion research and Studies 1 and 2 and investigates self-expansion within the context of indirect experiences that criminal justice students have with offenders (Study 3). Through academic experiences, criminal justice students learn about offenders through topics such as the causes of crime, the consequences of crime, and desistance. This provides students with opportunities to expand their knowledge and perspectives. Moreover, classroom experiences may portray offenders positively or negatively, which could impact student's perceptions of offenders. The vicarious knowledge of offenders that student acquire during their education as criminal justice majors, may serve to facilitate or hinder self-expansion with the group



criminal. Therefore, students may have the ability to self-expand with the group criminal based on the information they acquire about offenders and offending during their classroom experiences.

This dissertation also adds to the criminological literature on the consequences of relationships with offenders. What is known about the cognitive effects of relationships between offenders and pro-social others is largely from the perspective of the offender. Moreover, research that focuses on the effects of such relationships on pro-social others focuses on the physical and mental health consequences. This dissertation adds to the understanding of the effects of relationships with offenders by examining the cognitive consequences of such relationships from the perspective of various groups of non-criminal others.

## **Chapter 3: Overview**

### **Overview of the Present Research**

This chapter provides an overview of the logic of the set of studies and a general discussion of the shared research questions, hypotheses, and common measure, used across all three studies in this dissertation research. The overarching goal of this research is to examine one consequence of self-expansion; the extent to which non-criminal people who have relationships with an offender exhibit implicit criminal-self associations. For the purposes of this dissertation, an offender is defined as an individual who is/was arrested, convicted, and/or incarcerated. Across three experimental studies, this dissertation addresses the following three general research questions: 1) Do those who have direct relationships or indirect experiences with offenders exhibit implicit or explicit criminal-self associations, 2) What are the conditions under which implicit and explicit criminal-self associations are strengthened versus attenuated, and 3) What is the relation between implicit and explicit measures of criminal-self associations? To explore these questions three studies will be conducted to examine implicit criminal-self associations among three unique samples of non-criminal groups of people who have either direct relationships (Studies 1 and 2) or indirect experiences (Study 3) with offenders.

The goal of Study 1 is to establish if people who have personal relationships with offenders can implicitly associate with the stigmatized acquired group status, that of criminal, using a sample of non-criminal family members and friends of offenders. Study 2 will extend Study 1 and will examine implicit criminal-self associations among parole officers, a group that has professional relationships with offenders. Additionally, Studies

1 and 2 will test the conditions which may strengthen or attenuate implicit criminal-self associations. Using an experimental manipulation, both studies will test the effects of past experiences (i.e., positive versus negative) on implicit criminal-self associations. Finally, Study 3 will extend Studies 1 and 2 and will examine implicit criminal-self associations among a sample of criminal justice students; a group that has indirect experiences with offenders through their coursework. Additionally, Study 3 will examine the extent to which criminal justice students implicitly associate with well-known offenders (i.e., celebrities who have been convicted of a crime). Table 1 outlines the research questions, related hypotheses, and the studies in which they will be tested.

*Table 1. Research questions, related hypotheses, and studies in which they will be tested.*

<b>Research Question #1: Do those who have direct relationships or indirect experiences with offenders exhibit implicit or explicit criminal-self associations?</b>	
<b>HYPOTHESES</b>	<b>STUDIES</b>
H <sub>1</sub> : Individuals who have (1) direct relationships or (2) indirect experiences with offenders are predicted to exhibit stronger <i>implicit</i> criminal-self associations in comparison to those who do not.	1, 3
H <sub>2</sub> : It is predicted that <i>explicit</i> criminal-self associations will not differ between those who have (1) direct relationships or (2) indirect experiences with offenders and those who do not.	1, 3
<b>Research Question #2: What are the conditions under which implicit and explicit criminal-self associations are strengthened versus attenuated?</b>	
H <sub>3</sub> : Among those who have relationships with offenders, individuals who are reminded of positive experiences with an offender are predicted to exhibit stronger <i>implicit</i> criminal-self associations in comparison to those who are (1) reminded of negative experiences or (2) are not reminded of past experiences.	1, 2
H <sub>4</sub> : Among those who have relationships with offenders, it is predicted that <i>explicit</i> criminal-self associations will not differ between those who are reminded of positive experiences with an offender and those who are (1) reminded of negative experiences or (2) are not reminded of past experiences.	1

<b>Research Question #3: What is the relation between explicit and implicit measures of criminal-self associations?</b>	
H <sub>5</sub> : It is predicted that implicit and explicit associations will be weakly or not correlated for those who have (1) direct relationships or (2) indirect experiences with an offender.	1, 3

To address the first research question, Studies 1 and 3 will examine differences in implicit criminal-self associations between people who have (1) direct relationships and (2) indirect experiences with offenders and those who do not, respectively. It is expected that those who have either direct relationships or indirect experiences with offenders will exhibit stronger implicit (Hypothesis 1) but not explicit criminal-self associations (Hypothesis 2) in comparison to those who do not. This is consistent with self-expansion and implicit social cognition theories that state that relationships and experiences with others, both directly and indirectly, can result in implicit self-expansion and can affect implicit associations between the self and social groups. Direct and indirect relationships with offenders are not expected to affect explicit criminal self-associations primarily because of self-presentation concerns (Schnabel & Asendorpf, 2010).

To address the second research question, Studies 1 and 2 will examine the conditions related to self-expansion which in turn may impact the strength of implicit criminal-self associations. Both studies will utilize an experimental manipulation of past experiences to remind participants of either a positive or a negative experience with an offender. Self-expansion highlights the importance of positive experiences in facilitating self-expansion and by extension reminders of positive experiences are expected to strengthen implicit (Hypothesis 3) but not explicit criminal-self associations (Hypothesis 4).

To address the third research question, Studies 1 and 3 will examine correlations between measures of implicit and explicit criminal-self associations. Implicit social cognition studies have found low or no correlations between implicit and explicit measures, particularly in socially sensitive domains (Greenwald et al., 2009a). Given that associations with the group criminal is a socially sensitive subject, implicit and explicit measures of criminal-self associations are not expected to be correlated for those who have (1) direct relationships or (2) indirect experiences with an offender (Hypothesis 5).

In addition to the above mentioned hypotheses, each study will examine additional hypotheses unique to each sample. Additional theoretical information and study specific methodology will be presented in each study chapter.

**Implicit criminal-self associations.** Across all three studies, a Single-Category Implicit Association Test (SC-IAT; Karpinski & Steinman, 2006) was administered to measure individual differences in reaction time to pairing the self (vs. others) with the group criminal (Rivera & Veysey, 2014, 2018; Veysey & Rivera, 2017). The IAT uses reaction times to operationalize the strength of implicit associations between the group criminal and the self (Rivera & Veysey, 2015; Veysey & Rivera, 2017).

The IAT utilized in this dissertation is the same procedure developed and tested to understand the cognitive consequences of peoples' personal experiences in the criminal justice system (i.e., arrest, conviction, and/or incarceration) (Rivera & Veysey, 2014, 2018; Veysey & Rivera, 2017). Past research has established that people who have had personal experiences in the criminal justice system (i.e., arrested, convicted, and/or incarcerated) can exhibit implicit criminal-self associations (Rivera & Veysey, 2014, 2018; Veysey & Rivera, 2017). Moreover, implicit criminal-self associations were found

to be a stronger predictor of criminal behavior than explicit criminal-self associations. This demonstrates the explanatory ability of implicit cognitions particularly in socially sensitive domains.

For the purposes of this dissertation research the IAT is used as a measure of self-expansion and implicit criminal-self associations serve as a measure of a consequence of self-expansion. The underlying assumption is that in relationships between non-criminal individuals and offenders where self-expansion occurs, the non-criminal self is expected to associate with the group criminal, because it is a group that belongs to a close other. Therefore, non-criminal individuals in such relationships are expected to exhibit implicit criminal-self associations.

The SC-IAT was administered on a computer and participants were asked to complete four blocks of reaction time trials that were preceded by a set of instructions. In the SC-IAT, semantic stimuli that represent self (*me, my, mine, I, myself*), other (*they, them, their, theirs, other*), and criminal (*criminal, felon, lawbreaker, offender, convict, delinquent, prisoner*) randomly appeared one after the other in the center of the screen. Simultaneously, category labels were positioned on the top right and top left of the screen. The criminal words were pre-tested with a separate adult sample ( $N=48$ ) that rated the words (and a set of criminal-unrelated words) on a 7-point scale from “Not at all related to criminality” to “Completely related to criminality.” The criminal word stimuli, on average, were strongly related to criminality,  $M=6.17$ ,  $p<.001$ , Cohen’s  $d=3.22$  (large effect size; compared to a neutral mid-point) (Veysey & Rivera, 2017).

For half of the task, participants used the “A” key to classify “self” and “criminal” words and the “K” key to classify “other” words. The second half of the task was

reversed such that participants used the “A” key to classify “other” and “criminal” words and “K” to classify “self” words. These tasks were counterbalanced between participants. For each task, participants first read the instructions then completed 17 practice trials, followed by 51 critical trials. For each, trial, the target word remained on the screen until participants responded. If the participant responded correctly, a new target word appeared. If the participant responded incorrectly, the word “ERROR” appeared on the screen in place of the target word and remained until the participant pressed the correct key

The SC-IAT was scored in accordance with the procedures outlined by Karpinski and Steinman (2006). The score is the difference between the reaction times between the self and criminal trials and the other and criminal trials. Relatively higher SC-IAT scores indicate faster reaction times when self and criminal related stimuli are paired together than when other and criminal related stimuli are paired together, or relatively stronger implicit criminal-self associations.

The following three chapters will test self-expansion theory across three unique samples of non-criminal individuals who have relationships with offenders. Chapter 4 presents Study 1 that will test the implicit and explicit consequences of self-expansion with offenders within the context of those who have personal relationships with offenders, specifically family members and friends Study 2, described in Chapter 5, will examine the implicit consequences of self-expansion within the context of the professional relationship parole officers have with offenders. Study 3, presented in Chapter 6, will test the consequences of self-expansion on implicit and explicit associations with the group criminal and well-known group members (i.e., celebrities

who have been convicted of a crime) within the context of indirect experiences with offenders using a sample of criminal justice and non-criminal justice students.



#### **Chapter 4: Personal Relationships with Offenders Predict Self-Expansion (Study 1)**

Study 1 focuses on the cognitive consequences of personal relationships with offenders, specifically non-criminal friends and family members. While similar to previous tests of self-expansion in that this study focuses on the cognitive consequences of direct and personal relationships, this study extends past research by testing self-expansion with a negative or stigmatized acquired group status of a close other. Prior examinations of self-expansion have focused on positive acquired traits (e.g., energetic; Aron et al., 1991) and ascribed traits (e.g., ethnicity; Page-Gould et al., 2010a). This study extends past research and tests self-expansion with the stigmatized acquired group status, criminal. Within personal relationships, people have the ability to engage in positive, close, and intimate relationships with offenders, which may impact the extent to which people self-expand. The goals of Study 1 are to test: 1) self-expansion theory as a potential cognitive mechanism that facilitates implicit associations between the self-concept of those who have personal relationships with offenders and the group criminal and 2) the conditions which strengthen or attenuate implicit associations between the self-concept of those who have personal relationships with offenders and the group criminal. This chapter begins by providing an overview of the research centered around the collateral consequences of criminal justice contact on those who have personal relationships with offenders. The limitations of the extant research are then discussed. Following this is a discussion of the application of self-expansion in personal relationships with offenders. The methodology and results of Study 1 are then presented, and the chapter concludes with a discussion of the findings.

## **Collateral Consequences**

At year-end 2016, over 6 million people were under correctional supervision in the U.S. (Bureau of Justice Statistics, 2018a). The impact of correctional supervision is not limited to those under the purview of the criminal justice system, but extends to those who have personal relationships with such individuals (i.e., family members and friends). For example, approximately 1.1 million inmates are parents, but 2.7 million children have an incarcerated parent (Pew Research Center for the People and the Press, 2010). Moreover, it is estimated that approximately 10 million children have experienced parental incarceration at some point in their lives (The Sentencing Project, 2009). While it is unclear exactly how many family members and friends are affected by the correctional supervision of loved ones, these data suggest that many more millions of people each year are impacted (Comfort, 2007).

Research has extensively documented the behavioral, physical, mental, and social impact of the collateral consequences of involvement in the criminal justice system. Following contact with the criminal justice system, many of those embedded in the social networks of offenders, primarily family members, alter their behavior (Christian, 2005; Comfort, 2003, 2007), suffer mental and physical health consequences (Arditti, Lambert-Shute, & Joest, 2003), experience economic hardship (Naser & Visser, 2006), reorient their thoughts (May, 2000), and experience stigmatization (Philips & Gates, 2011).

Notwithstanding the contributions of previous research, it provides only partial understanding of the collateral consequences of criminal justice involvement experienced by non-criminal individuals within the social networks of offenders. First, the extant research has predominantly focused on the collateral consequences of incarceration. A

small body of research suggests that those who have relationships with offenders are affected by other types of experience within the criminal justice system, such as an arrest or conviction (Arditti et al., 2003; Sturges & Hanrahan, 2011). Second, extant research has primarily focused on spouses, parents, and children of offenders. This research, also, has failed to take into account others who are embedded in the social networks of offenders, such as close friends or extended family members (Christian, Mellow & Thomas, 2006). While not immediate family, these individuals may also be impacted by a loved one's contact with the criminal justice system (Goffman, 2014). Finally, although some studies suggest that relationships with offenders have cognitive consequences (Comfort, 2003, 2007; Goffman, 1963), yet to the author's knowledge, no study has examined or measured this. What is known about the cognitive consequences of contact with the criminal justice system is from the perspective of the offender (see Chapter 2).

Study 1 builds upon and extends the criminological literature centered on the consequences of a close other's contact with the criminal justice system and focuses on the cognitive consequences of personal relationships with offenders. Not only does Study 1 focus on the cognitive consequences of incarceration, but also on the cognitive consequences of experiences such as an arrest or conviction. In addition the scope of Study 1 is not only limited to family members, but also to other types of personal relationships including close friends and extended family members (e.g., aunt, uncle, friends). The goal of Study 1 is to examine two potential cognitive consequences of personal relationships with offenders, implicit and explicit criminal-self associations. To this end, the present study utilizes two implicit measures, the Go/No-Go Association Task (GNAT; Nosek & Banaji, 2001) and the IAT (see Chapter 3) to measure implicit

criminal-self association strength (See below for a discussion of the GNAT). Explicit associations are measured through self-report.

### **Self-Expansion in Personal Relationships with Offenders**

Study 1 applies the mechanism of self-expansion to test if and how the cognitions of those who have personal relationships with offenders are impacted. Study 1 is a straightforward extension of previous of self-expansion research, in that it focuses on the consequences of direct relationships; specifically, personal relationships on the self-concept. Past self-expansion research has predominantly focused on the effects of personal relationships on the self-concept (Aron et al., 1991; Mashek et al., 2003; Page-Gould et al., 2010a; Smith et al., 1999) As such, the purpose of Study 1 is to establish if non-criminal individuals, in relationships with offenders, can self-expand with the group criminal, a group that belongs to a close other.

One potential consequence of self-expansion with an offender may be an implicit criminal-self association. Past research has found that people who have had personal experiences in the criminal justice system, such as an arrest, conviction, or incarceration, can exhibit an implicit criminal-self association (Rivera & Veysey, 2014, 2018; Veysey & Rivera, 2017). However, no study has examined the effects of these experiences on non-criminal individuals who are in relationships with individuals who associate with the group criminal. Therefore, Study 1 examines if individuals who have not been arrested, convicted, or incarcerated, can also exhibit an implicit criminal-self, not based on their own experiences, but based on their personal relationships with someone who has had these experiences.

Self-expansion theory would suggest that those who have a personal relationship with an offender may be cognitively affected by their relationship. While, research has focused on self-expansion with positive acquired traits (e.g., energetic; Aron et al., 1991) and ascribed traits (e.g., ethnicity; Page-Gould et al., 2010a), to the author's knowledge, to date, no known study has examined self-expansion with a negative acquired trait, such as that of criminal. Study 1 extends self-expansion research and examines self-expansion with a negative or stigmatized acquired group status, that of criminal. Previous research has demonstrated that people can associate with negatively ascribed traits (i.e., Latinx) and negative traits related to a close friend's ethnic group, to which the self does not belong (Page-Gould et al., 2010a). It stands to reason, that similar to the mechanism of self-expansion with a close other's ethnic group, people who have personal relationships with offenders may also self-expand with the group criminal and exhibit an implicit criminal-self association.

Using the same logic that underpins previous examinations of self-expansion, those who have personal relationships with offenders may experience self-expansion through close, frequent and positive experiences with offenders. Family and friends of offenders can engage in close, frequent, and positive experiences with offenders inside and outside of the criminal justice system (Christian, 2005; Comfort 2003, 2007). For example, they may accompany an offender to activities such as aftercare programs (Nelson et al., 1999), visit an incarcerated individual (Christian, 2005; Comfort 2003, 2007), or they may engage in everyday activities together, such as sharing a meal. During these various types of interactions, those who have personal relationships with offenders acquire knowledge about the criminal justice system, and procedures, and the

perspectives, thoughts, and behaviors related to being an offender. Such opportunities provide knowledge and new perspectives and potentially new characteristics, thereby potentially impacting the cognitions of those who have personal relationships with offenders. Study 1 tests the following hypothesis: individuals who have personal relationships with offenders are predicted to exhibit stronger implicit criminal-self associations in comparison to those who do not (Hypothesis 1).

Within relationships, people have the ability to engage in various types of experiences that may facilitate or hinder self-expansion. Specifically, positive experiences may be more likely to promote self-expansion, in comparison to negative experiences. Indeed, positive experiences have been found to facilitate the inclusion of aspects of a close other into the self-concept (Aron & Aron, 1986; Fraley & Aron, 2004; Page-Gould et al., 2010a; Waugh & Fredrickson, 2006). In contrast, negative experiences or a lack of positive experiences do not facilitate self-expansion and may result in distancing and distinguishing the self from the other (Fraely & Aron, 2004; Waugh & Fredrickson, 2006). By extension, within relationships with offenders, the extent to which people engage in positive experiences may impact the extent to which self-expansion occurs and consequently the strength of an implicit criminal-self association. In the absence of measures of persistent close, frequent, and positive experiences, an experimental manipulation of a memory of a past experience with an offender is used to test whether implicit criminal-self associations differs based on salient experience (See Chapter 2 for a discussion on the effects of salient memories). As such, Study 1 tests the following hypothesis: among those who have relationships with offenders, individuals who are reminded of positive experiences with an offender are predicted to exhibit

stronger implicit criminal-self associations in comparison to those who are (1) reminded of negative experiences or (2) not reminded of past experiences (Hypothesis 3).

Self-expansion may also be more likely to occur within intimate and close relationships. Indeed self-expansion research suggests that people who are in intimate relationships (e.g., parents, partners, close friends) (Aron et al., 1991; Aron et al., 1992; Page-Gould et al., 2010a, 2010b; Slotter & Gardner, 2009; Slotter & Gardner, 2012) or feel close to the other person (Mashek et al., 2003) are more likely to self-expand with the other person in comparison to people who are in more distant or less close relationships. In the context of personal relationships with offenders, intimate or close relationships provide non-criminal individuals with the opportunities to take on the perspectives and characteristics of the offender. Therefore, it is expected that the nature of the relationship and feelings of closeness with an offender is likely to affect the extent to which people self-expand and exhibit implicit criminal-self associations. As such, Study 1 investigates the following hypotheses: it is predicted that individuals who have intimate relationships with offenders (i.e., immediate family or best friend) will exhibit stronger implicit criminal-self associations in comparison to those who do not (Hypothesis 6), and stronger feelings of closeness will be related to stronger implicit criminal-self associations (Hypothesis 8).

However, it is expected that self-expansion will not affect explicit criminal-self associations. People in personal relationships with offenders may be unaware of how their relationships affect their cognitions or due to the socially sensitive nature of the subject, may be unwilling to report on their associations with the group criminal. In line with this, Study 1 will test the following hypotheses: it is predicted that explicit criminal-

self associations will not differ between those who have personal relationships with offenders and those who do not (Hypothesis 2). Among those who have relationships with offenders, it is predicted that explicit criminal-self associations will not differ between those who are reminded of positive experiences with an offender and those who are (1) reminded of negative experiences or (2) not reminded of past experiences (Hypothesis 4), there will be no difference in explicit criminal-self association strength between those who have intimate relationships with offenders and those who do not (Hypothesis 7), and feelings of closeness will not be related to explicit criminal-self associations (Hypothesis 9). As such, implicit and explicit criminal-self associations are predicted to be weakly or not correlated among those who have personal relationships with an offender (Hypothesis 5). With regard to those who do not have personal relationships with offenders, it is expected that implicit and explicit criminal-self associations will be weakly or not correlated (Hypothesis 10), because implicit and explicit cognitions are derived from distinct processes (Greenwald & Banaji, 1995).

### **Study Overview**

The goal of Study 1 is to test whether people who have personal relationships with offenders can implicitly associate with the stigmatized acquired group status, criminal, using a sample of non-criminal family members and friends of offenders. To measure implicit criminal-self associations, Study 1 uses two implicit measures a Single-Category Implicit Association Test (SC-IAT; Greenwald et al., 1998; Karpinski & Steinman, 2006) and the closely related Go/No-Go Association Task (GNAT; Nosek & Banaji, 2001). A self-report measure of explicit criminal-self associations is also used.



Additionally, Study 1 tests the conditions that may strengthen or attenuate implicit criminal-self associations. Specifically, Study 1 examines the effect of reminders of past experiences on implicit and explicit criminal-self associations using an experimental manipulation procedure. Participants who have personal relationships with an offender will either be reminded of a positive or negative past experience with an offender or will not be reminded of a past experience, which is expected to either strengthen or attenuate implicit criminal-self associations. Lastly, because relationship characteristics are likely to impact the extent to which people self-expand, Study 1 examines the characteristics of personal relationships with offenders, specifically, the nature of the relationship and feelings of closeness. Tables 2 and 3 outline the general and study specific research questions and hypotheses tested in Study 1.

*Table 2. General research questions and related hypotheses tested in Study 1.*

<b>Research Question #1: Do those who have direct relationships or indirect experiences with offenders exhibit implicit or explicit criminal-self associations?</b>
H <sub>1</sub> : Individuals who have personal relationships with offenders are predicted to exhibit stronger <i>implicit</i> criminal-self associations in comparison to those who do not.
H <sub>2</sub> : It is predicted that <i>explicit</i> criminal-self associations will not differ between those who have personal relationships with offenders and those who do not.
<b>Research Question #2: What are the conditions under which implicit and explicit criminal-self associations are strengthened versus attenuated?</b>
H <sub>3</sub> : Among those who have relationships with offenders, individuals who are reminded of positive experiences with an offender are predicted to exhibit stronger <i>implicit</i> criminal-self associations in comparison to those who are (1) reminded of negative experiences or (2) are not reminded of past experiences.
H <sub>4</sub> : Among those who have relationships with offenders, it is predicted that <i>explicit</i> criminal-self associations will not differ between those who are reminded of positive experiences with an offender and those who are (1) reminded of negative experiences or (2) are not reminded of past experiences.
<b>Research Question #3: What is the relation between explicit and implicit measures of criminal-self associations?</b>

H<sub>5</sub>: It is predicted that implicit and explicit associations will be weakly or not correlated for those who have personal relationships with an offender.

*Table 3. Study specific research questions and related hypotheses tested in Study 1.*

<b>Research Question #4: What are the characteristics of personal relationships with offenders, under which implicit and explicit criminal-self associations are strengthened versus attenuated?</b>
H <sub>6</sub> : Individuals who have intimate relationships with offenders (i.e., immediate family or best friend) are predicted to exhibit stronger implicit criminal-self associations in comparison to those who do not (i.e., extended family or friend).
H <sub>7</sub> : It is predicted that there will be no difference in explicit criminal-self association strength between those who have intimate relationships with offenders and those who do not.
H <sub>8</sub> : It is predicted that stronger feelings of closeness will be related to stronger implicit criminal-self associations.
H <sub>9</sub> : It is predicted that feelings of closeness will not be related to explicit criminal-self associations
<b>Research Question #5: What is the relation between explicit and implicit measures for those who do not have personal relationships with offenders?</b>
H <sub>10</sub> : It is predicted that implicit and explicit criminal-self associations will be weakly or not correlated for those who do not have personal relationships with offenders.

## Method

**Participants.** Study 1 adopted a 4 (Reminder of past experience: positive vs. negative vs. no reminder vs. no relationship) X 2 (Relationship with offender: yes vs. no) between participants design. G\*Power (Faul, Erdfelder, Buchner, & Lang, 2009) was used to conduct an *a priori* power analysis to determine the minimum required sample size. The primary goals of Study 1 were to 1) examine the effect of having a relationship with an offender on implicit criminal-self associations, and 2) to examine the conditions under which implicit criminal-self associations are strengthened versus attenuated. Therefore, the following parameters were chosen: ANOVA, fixed effects, omnibus, one-

way with a medium effect size  $f$  of .250, four groups, power of .8, and alpha at .05.

G\*Power calculated a total sample size of 180.

One hundred eighty-two students from undergraduate psychology courses at an urban public university participated in Study 1 in exchange for course credit. Forty-four participants' data were dropped from analyses: data from six participants were excluded due to technical difficulties, five participants' data were four standard deviation outliers on the SC-IAT measure, two participants' data were excluded from analyses due to reaction time error rates on the SC- IAT (described below) that were greater than 30% overall or over 40% on any given block (as recommended by Greenwald et al., 2003), 21 participants' data were excluded for inconsistent responses pertaining to their relationship status with an offender (described below), and ten participants' data were excluded from analyses due to having a personal criminal justice experience (i.e., arrested, convicted, and/or incarcerated). Having a personal criminal justice experience has been found to impact implicit criminal-self associations (Rivera & Veysey, 2014; Veysey & Rivera, 2017) and as such, participants with personal criminal justice experiences are expected to already exhibit implicit criminal-self associations, regardless of their relationship with an offender.

The final sample consisted of 138 participants (112 female, 26 male,  $M_{\text{age}} = 21.01$ ,  $SD_{\text{age}} = 5.71$ , age range: 18-56 years). Approximately 32% of participants identified as Hispanic, 31% were Black, 13% were Asian, 10% were Multiracial, 8% were White, 3% were Middle Eastern or North African, 1 % were American Indian or Alaskan, 1 % were Hawaiian or Pacific Islander, and 1% identified as another ethnicity

not listed. Seventy-five percent of participants reported having a relationship with an offender (see procedure below).

### **Measures.**

*Positive versus negative past experience (manipulated).* In the absence of being within the actual presence of a close other, experimental manipulations of memories of a close other can activate the same processes that are activated during real life interactions and therefore should produce similar effects (Garcia, Weaver, Moskowitz, & Darley, 2002). In the real world, positive experiences with offenders are more likely to promote self-expansion (e.g., moments of success, providing support) in comparison to negative experiences (e.g., confrontation). In the absence of engaging in these experiences, Study 1 utilizes an experimental manipulation procedure to make salient memories that are expected to facilitate or hinder self-expansion. In turn, salient memories of past experiences are expected to impact the extent to which people exhibit implicit criminal-self associations.

In theory, simply having a personal relationship with an offender may result in an implicit criminal-self association. However, experiences within relationships may further impact the extent to which people self-expand. Self-expansion research has demonstrated that positive experiences can promote self-expansion (Farley & Aron 2004; Waugh & Fredrickson, 2006). In relationships, people have countless memories, but only salient memories are those which are used to guide cognitions. The activation of a particular memory should also activate any concepts related to the memory (Greenwald et al. 2002). In the context of the present study, participants who are reminded of a positive experience with an offender are expected stronger implicit criminal-self associations in

comparison to those who are not reminded of any experience. This is because the reminder of a positive experience with an offender is expected to make salient a self-expanding experience, more so than just having a relationship. In contrast, reminders of negative experiences are not expected to make salient a memory related to self-expansion and may even result in distancing the self from the group criminal.

Understanding the types of experiences in personal relationships with offenders which facilitate or attenuate implicit criminal-self association strength may help to elucidate the mechanism between relationships with delinquent others and criminal behavior. Past research has demonstrated that implicit criminal-self association strength is a predictor of criminal behavior for people who have had personal experiences in the criminal justice system (Rivera & Veysey, 2018). However, it is unknown if and how experiences within personal relationships with offenders can strengthen or attenuate implicit criminal-self associations for non-criminal individuals in these relationships. It may be possible that positive experiences in relationships with deviant others may explain the relation between parental or peer criminal behavior and the onset of criminal behavior of non-criminal individuals.

Rooted in the basic principles of self-expansion, the purpose of the manipulation was to remind participants of a specific type of experience with an offender with whom they have a relationship. Participants who indicated having a relationship with an offender (on a pre-screening questionnaire) were randomly assigned to one of three manipulation conditions: the positive experience condition, the negative experience condition, or the no reminder condition.

Participants who were assigned to either the positive or negative experience condition were first asked: "Please take a moment and select in your mind, a close friend or family member who has been arrested for, convicted (charged of), or incarcerated for a crime. Please type their initials." Next, to ensure the person imagined in the previous question had a criminal justice experience participants were asked: "Please check the box(es) that apply to the person you indicated above:" and select from the following options: *They were arrested*, *They were convicted*, or *They were/are incarcerated*. Participants in the positive experience condition were given the following prompt: "Please imagine a positive interaction or experience you have had with the individual you imagined in the previous question. Please describe the positive experience as well as your thoughts and feelings during this positive interaction. Please provide details and write freely."

Participants in the negative experience condition were given the same prompt, but were asked to focus on a negative experience. Participants in the no reminder condition did not complete this procedure; they proceeded directly from the informed consent to the SC-IAT (described below). In Study 1, 28% percent of participants were randomly assigned to the positive experience condition, 28% were randomly assigned to the negative experience condition, and 19% were randomly assigned to the no reminder condition. Twenty-five percent of participants reported no relationship with an offender and were assigned to the no relationship condition, where they did not complete the manipulation procedure and also proceeded directly from the informed consent to the SC-IAT.

*Closeness.* Participants who indicated having a relationship with an offender were asked to rate how close they felt with the offender they were thinking of. Participants responded to a single question in which they were asked: "How close do you feel to the

person you imagined in the previous question?" on a 7-point scale ranging from (0) *Not at all close* to (6) *Very close*.

*Description of offender.* Participants who indicated having a relationship with an offender were asked to provide descriptions of the offender they were thinking of. First participants were asked to describe their relationship by answering the following question: "What is the nature of your relationship with the person you imagined in the previous question?" and were asked to select from the following options: *parent, other caregiver, sibling, aunt/uncle, cousin, friend, best friend, or other (please specify)*. Then participants were asked to describe the offender in terms of gender, age, and ethnicity.

*Implicit criminal-self association Implicit Association Test (IAT).* See Chapter 3.

*Implicit criminal-self associations Go/No-Go Association Task (GNAT).* In addition to the IAT a Go/No-Go Association Task (GNAT; Nosek & Banaji, 2001) was administered to measure individual differences in implicit criminal-self association strength. Studies have used the GNAT to assess implicit self-related beliefs, such as self-esteem (Gregg & Sedikides, 2010) and personality (Boldero, Rawlings, & Haslam, 2007). Moreover, studies have demonstrated the predictive validity of the GNAT (Gonsalkorale, von Hippel, Sherman, & Klauer, 2009; Teachman, 2007). Like the IAT, the GNAT is a measure of implicit social cognition and can be used to operationalize the strength of implicit associations between the category criminal and the self. Each measure is likely to only partially reflect underlying cognitions, due to the properties of each measure, regardless of how robust the measure is. Therefore, using two measures of implicit cognition can provide a more comprehensive understanding of self-related cognitions.

Procedurally, the GNAT differs from the IAT in three ways: First, unlike the IAT, the GNAT uses a response deadline, thereby limiting cognitive resources, which may more accurately capture implicit cognitions (Nosek & Banaji, 2001). Second, due to the design of the GNAT, it may potentially be better at measuring implicit cognitions towards a target category that does not have a clear contrast, as is the case with the category criminal (Lee, Rogge, & Reis, 2010; Nosek & Banaji, 2001). The design of the task does not require target categories to be paired. Third, rather than making one of two responses, only a single response is required for the GNAT. When a term belongs to a target category, a response is required, “go”. No response, “no-go”, is required when a term does not belong to the target category.

Although the GNAT is an implicit measure, unlike the IAT it does not rely on reaction times to measure implicit association strength, rather it is based on sensitivity scores ( $d'$  [d-prime]). Sensitivity scores are used to assess the strength of association by the degree to which stimuli related to the target category (criminal) and the self and other can be discriminated from distractor items that do not belong to those categories. In the present study, the extent to which the target categories criminal and self are associated should determine sensitivity or discriminability of signal from noise. In other words, stronger associations, facilitate discrimination. Like the IAT, for the purposes of this dissertation, the GNAT is used as a measure of self-expansion and  $d'$  scores when criminal and self are paired together serve as measure of implicit criminal-self association strength. The underlying assumption is that that in relationships between non-criminal individuals and offenders where self-expansion occurs, the non-criminal self is expected to associate with the group criminal, because it is the category that belongs to a close



other. Therefore, non-criminal individuals in such relationships are expected to accurately discriminate between self and criminal from distractor items.

The GNAT is a word-sorting task in which stimuli are presented one at a time in random order. For each block of trials, specific types of stimuli (e.g., self, other, or criminal words from the SC-IAT) were assigned as targets and the remaining stimuli served as distractors. Participants were instructed to press the space bar when a target word appeared (go) and to refrain from pressing the space bar when a distractor appeared (no-go). Stimuli were presented for 600 ms. each, with a 400 ms. interval in-between trials. After each trial, a green *O* appeared for a correct response and a red *X* for an incorrect response appeared on the screen for 100 ms.

In the GNAT the semantic stimuli that represent self, other, and criminal that were used in the SC-IAT were also used in this task and randomly appeared one after the other in the center of the screen. The self-related words were *me*, *my*, *mine*, *I*, and *myself*. The other-related words were *they*, *them*, *their*, *theirs*, and *other* and the criminal-related words were *criminal*, *felon*, *lawbreaker*, *offender*, *convict*, *delinquent*, and *prisoner*. The same self and other words were used for two practice trial blocks which consisted of 16 trials per-block.

The GNAT is comprised for four blocks comprising 228 trials (including 32 practice trials). Throughout the two practice blocks, participants were asked to sort the self stimuli from the other stimuli. The two practice trials were followed by two critical blocks comprised of 98 trials per block. In each critical block, participants were asked to sort between the three sets of stimuli (self, other, criminal words). In one 98-trial block both self stimuli and criminal stimuli were identified as targets; in the other 98 trial block,

other stimuli and criminal stimuli served as targets. The order of the critical blocks was counterbalanced across respondents.

$d'$  scores were used to represent implicit criminal-self association strength.  $d'$  was calculated in accordance with the procedures outlined by Nosek and Banaji (2001). Sensitivity is calculated as 1) the proportion of hits (correct “go” response for signal items) and false alarms (incorrect “go” response for noise items) are converted to z-scores; 2) a difference between the z-score values for hits and false alarms is  $d'$ . Relatively higher  $d'$  scores when criminal and self are paired together indicate a greater ability to discriminate between a “go” response and “no go” response. This indicates relatively stronger implicit criminal-self association strength.

*Explicit criminal-self associations.* Study 1 included a measure of explicit criminal-self associations. This measure is the same procedure developed and tested to understand the cognitive consequences of peoples’ personal experiences in the criminal justice system (Rivera & Veysey, 2014, 2018; Veysey & Rivera, 2017). This work has established that people who have personal experiences in the criminal justice system do exhibit stronger explicit criminal-self associations in comparison to those who have not (Rivera & Veysey, 2014; Veysey & Rivera, 2017). For the purposes of this dissertation, explicit criminal-self associations serve as a measure of a consequence of self-expansion. Similar to the above rationale, in relationships where self-expansion occurs, the non-criminal self is expected to associate with the group criminal. However, due to social desirability concerns or because people are unaware of the effects of their relationships on their self-concept, non-criminal individuals may not exhibit explicit criminal-self

associations and therefore implicit and explicit measures of criminal self-associations are not expected to be correlated.

Participants were asked to self-report the extent to which they associated themselves with the seven criminal words in the SC-IAT on a 7-point scale ranging from (0) *Not at all characteristic of me* to (6) *Extremely characteristic of me*. All words were presented in random order. Higher scores indicate stronger explicit criminal-self associations ( $\alpha = .812$ ).

*Demographics.* Participants were asked to identify their gender, age, race/ethnicity, income, birth region, marital status, and their personal criminal justice experience.

**Procedure.** Prior to being invited to participate in the study, participants were asked the following question on a pre-screening questionnaire: “Do you personally know anyone who was/is incarcerated?” The original rationale was to ensure that participants had a relationship with another person who has had substantial experiences in the criminal justice system. However, during the experiment, participants were not limited to thinking about a person who had been incarcerated, but were permitted to think about a person who had any type of contact with the criminal justice system, including an arrest, conviction, and/or incarceration. The reason for this change was that in the context of personal criminal justice experiences, implicit criminal-self association strength was related to not only experiences of incarceration, but also arrest and conviction. That is, personal experiences of arrest and/or conviction are also related to adopting an implicit criminal-self association. Therefore, because experiences of arrest, conviction, and incarceration have been found to result in the association between the self of the offender

and the group criminal. As such, those who have personal relationships with offenders may also be expected to exhibit an association between the self and the group criminal, because it is the group that belongs to the close other, regardless of the type of criminal justice experience they have had.

Participants who responded affirmatively to knowing someone who had been incarcerated were randomly assigned to one of three conditions, the positive experience condition, the negative experience condition, or the no reminder condition. Participants who indicated that they did not have a relationship with an incarcerated individual were assigned to the no relationship condition.

Upon arrival to the lab, a female research assistant informed participants that the study's purpose was to examine "people's identities and experiences." Participants in the positive or negative experience conditions first completed the manipulation task then proceeded to the measured variables (in the order presented above) and were fully debriefed. Participants in both the no reminder condition and those in the no relationship condition began the study with the two implicit measures in the order presented above and the measure of explicit criminal-self associations. Then, to confirm their relationship status with an offender, participants in these conditions were asked the following question: "Do you have a close friend or family member who has been arrested for, convicted (charged of), or incarcerated for a crime?" Participants who responded affirmatively were then asked to complete the closeness and description of offender measures (described above). This question served two purposes: 1) this was used to confirm that participant responses were consistent with their pre-screen responses regarding their relationship status with an offender, and 2) for the participants in the no

reminder condition, this was used to collect data about participants' relationships without making salient the offender before completing the measures of criminal-self associations. Finally, participants in the no reminder and no relationship conditions completed the demographics questionnaire and were fully debriefed.

## Results

**Plan of analysis.** The primary interests of Study 1 are: 1) the effect of having a relationship with an offender on implicit and explicit criminal-self association strength and 2) the conditions under which implicit and explicit criminal-self associations are strengthened versus attenuated, specifically reminders of past experiences, nature of the relationship, and closeness with an offender. Because implicit criminal-self association strength was measured using both the IAT and the GNAT, the following plan of analysis was used to examine the above mentioned hypothesis.

In accordance with the procedures set out by Nosek and Banaji (2001), GNAT scores of 0 or below indicate that subjects were either unable to determine a “go” signal from a “no-go” signal, or were not performing the task as instructed. As such, in addition to the above noted participants, 14% (n= 26) of the total number of participants who took the study had GNAT scores of 0 or below were removed from analyses involving the GNAT. Past studies using have noted variability in the ability of participants to respond properly on the GNAT, such that anywhere between six to 26% of participants in past studies have had GNAT scores of 0 or below (Boldero et al., 2007; Gonsalkorale et al., 2009; Lee et al., 2010; Nosek & Banaji, 2001; Strurge-Apple, Rogge, Peltz, Suor, & Skibo, 2015).

Moreover, performance on the GNAT criminal-self blocks was correlated with performance on the criminal-other blocks,  $r(112) = .60$ ,  $p < .001$ . This suggests that the relation between implicit criminal-self and criminal-other scores can be explained by shared method variance. Similar patterns have been observed in other studies using the GNAT because of the general level of ability, effort, and attention used in both blocks of the task (Boldero et al., 2007; Lee et al., 2010). To address this limitation, GNAT implicit criminal-other association scores served as a control variable for all analyses in which GNAT implicit criminal-self association scores served as the dependent variable. This is expected to yield a stronger effect of the independent variables on GNAT implicit criminal-self association scores. This serves to remove the effect of completing the GNAT criminal-other blocks on the relation between the independent variables and GNAT implicit criminal-self association scores. Therefore, GNAT scores were analyzed using an analysis of covariance (ANCOVA) for hypothesis testing for Hypotheses 1, 3, and 6. Regressions were used to test Hypotheses 5, 9, 10.

Given the number of participants removed from analyses involving GNAT scores, IAT and explicit criminal-self association scores were analyzed separately using a multivariate analysis of variance (MANOVA) for hypothesis testing for Hypotheses 1, 2, 3, 4, 6, and 7. Regressions were also used to test Hypotheses 5, 8, 9, and 10.

### **Hypothesis testing.**

First, the mean IAT, GNAT, and explicit criminal-self association scores were calculated for each condition: positive experience ( $M_{IAT} = -.07$ ,  $SD = .13$ ,  $M_{GNAT} = 1.37$ ,  $SD = .58$ ,  $M_{explicit} = .19$ ,  $SD = .22$ ), negative experience ( $M_{IAT} = -.08$ ,  $SD = .11$ ,  $M_{GNAT} = 1.57$ ,  $SD = .58$ ,  $M_{explicit} = .24$ ,  $SD = .34$ ), no reminder ( $M_{IAT} = -.08$ ,  $SD = .12$ ,  $M_{GNAT} =$

1.38,  $SD = .65$ ,  $M_{explicit} = .23$ ,  $SD = .30$ ), no relationship ( $M_{IAT} = -.07$ ,  $SD = .12$ ,  $M_{GNAT} = 1.71$ ,  $SD = .62$ ,  $M_{explicit} = .18$ ,  $SD = .27$ ). Zero-order correlations between the demographic variables (age, income) and IAT, GNAT, and explicit criminal-self association scores were conducted for the entire sample. The zero-order correlation analyses revealed that age and income were not statistically significantly related to IAT, GNAT, and explicit criminal-self association scores. The relation between the categorical demographic variables (gender, race/ethnicity, employment, parental level of education) and IAT, GNAT, and explicit criminal-self association scores across the entire sample were analyzed using ANOVAs. Gender was coded (1 = *male*; 0 = *female*); race/ethnicity was coded (1 = *Black/African American and Hispanic*; 0 = *all others*); employment status was coded (1 = *employed*; 0 = *not employed*); parental level of education was coded (1 = *elementary/middle school*; 2 = *GED*; 3 = *high school*; 4 = *some college*; 5 = *college graduate school*; 2 = *some college*; 3 = *college graduate*). This analysis revealed that race/ethnicity was related to explicit criminal-self association strength,  $F(1, 136) = 8.57$ ,  $p = .004$ . Black/ African American and Hispanic participants ( $M = .16$ ,  $SD = .22$ ) exhibited significantly weaker explicit criminal-self associations in comparison to non-Black/African American and non-Hispanic participants ( $M = .30$ ,  $SD = .34$ ). As such, racial-ethnic identification was entered as a control variable in analyses for Hypotheses 2, 4, 5, 7, 9, and 10.

First, the main effect of having a relationship with an offender on implicit and explicit criminal-self association strength was tested (Hypotheses 1 and 2). Results yielded no significant difference in IAT scores between participants who had a relationship with an offender and those who did not,  $F(1, 135) = .49$ ,  $p = .486$ ,  $\eta_p^2 = .01$ .

There was also no significant main effect of having a relationship with an offender on GNAT scores,  $F(1, 109) = 1.42, p = .235$ . Hypothesis 1 was not supported. However, Hypothesis 2 was supported such that there was no significant difference in explicit criminal-self association scores between participants who had a relationship with an offender and those who did not,  $F(1, 135) = 2.49, p = .117, \eta_p^2 = .02$ .

To test the effect of reminders of past experiences on implicit and explicit criminal-self association strength, an omnibus test was first conducted between all four conditions (Hypotheses 3 and 4). There was no significant difference in IAT scores between conditions,  $F(3, 133) = .20, p = .897, \eta_p^2 = .01$ . There was also no significant main effect of condition on GNAT scores,  $F(3, 107) = 1.29, p = .281$ . Because results of these analyses yielded no difference between conditions, no further testing was conducting. Hypothesis 3 was not supported. However, Hypothesis 4 was supported such that there was no significant difference in explicit criminal-self association scores between conditions,  $F(3, 133) = 1.25, p = .296, \eta_p^2 = .03$ .

To test Hypothesis 5, two regressions were conducted to examine the relation between implicit and explicit criminal-self association strength between participants who had a relationship with an offender. In the first regression, IAT scores were regressed on explicit criminal-self association scores. In the regression, racial-ethnic identification was entered in the first step and explicit criminal-self association scores were entered in the second step. There was no significant relationship between IAT scores and explicit criminal-self association strength for the participants who had a relationship with an offender,  $\Delta F(2, 100) = .13, p = .724, R^2 = .01, \beta = .04$ .



In the second regression, GNAT scores were regressed on IAT and explicit criminal-self association scores. In the regression, racial-ethnic identification and GNAT implicit criminal-other scores were entered in the first step and IAT and explicit criminal-self association scores were entered in the second step. In line with research on the correspondence between implicit measures (Bosson, Swann, & Pennebaker, 2000; Nosek & Banaji, 2001), the relationship between GNAT and IAT scores was not significant,  $\Delta F(4,79) = .45, p = .396, R^2 = .41, \beta = .08$ . Also, GNAT and explicit criminal-self association scores were not significant,  $\Delta F(4,79) = .45, p = .057, R^2 = .41, \beta = .03$ . The same regressions were between implicit and explicit measures among the full sample were also conducted. The patterns were the same as above such that implicit and explicit measures were not significantly related. Hypothesis 5 was supported.

The same analyses were conducted with the subsample of participants who did not have a relationship with an offender. The regression yielded a significant relationship between IAT scores and explicit criminal-self association strength for the participants who did not have a relationship with an offender,  $\Delta F(2,32) = 4.38, p = .044, R^2 = .14, \beta = .35$ . However, this relationship was weak such that explicit criminal-self association strength increased by .35 for every one unit increase in implicit criminal-self association strength. Similar to the above analyses, the regression in which GNAT scores served as the dependent variable, did not yield neither a significant relationship between GNAT and IAT scores,  $\Delta F(4,23) = .50, p = .37, R^2 = .31, \beta = .19$ , nor a significant relationship between GNAT and explicit criminal-self association scores,  $\Delta F(4,23) = .50, p = .483, R^2 = .31, \beta = -.14$ . Hypothesis 10 was supported, such that implicit and explicit measures

were not related only when GNAT scores served as the dependent variable and were weakly related when IAT scores served as the dependent variable.

Next, the effect of the nature of the relationship with an offender on implicit and explicit criminal-self association strength (Hypotheses 6 and 7) was tested. In line with self-expansion research, intimate relationships, such as those between parents, spouses, and close friends, are those that have been found to facilitate self-expansion in comparison to more distant relationships (Aron et al., 1991; Aron et al., 1992; Page-Gould et al., 2010a, 2010b; Slotter & Gardner, 2009; Slotter & Gardner, 2012). Of the participants who indicated having a relationship with an offender ( $n=103$ ), 33% of participants indicated having intimate relationships with the offender they were thinking of (e.g., parent, significant other, sibling, best friend) and 67% indicated having more distant relationships (e.g., aunt/uncle, cousin, friend, family friend). A dichotomous variable was created such that relationship was coded (1 = *intimate relationship*; 0 = *distant relationship*). There was no significant difference in IAT scores between participants who indicated having an intimate relationship with an offender and those who did not,  $F(1, 100) = .63, p = .432, \eta_p^2 = .01$ . There was also no significant main effect of nature of the relationship on GNAT scores,  $F(1, 81) = 1.23, p = .292$ . Hypothesis 6 was not supported. However, Hypothesis 7 was supported, such that there was no significant difference in explicit criminal-self association scores between participants who had an intimate relationship with an offender and those who did not,  $F(1, 100) = .89, p = .347, \eta_p^2 = .01$ .

To test Hypothesis 8 two regressions were used to test the relation between closeness with an offender and implicit criminal-self association strength. In the first

regression IAT scores were regressed on mean-centered closeness scores. Implicit criminal-self association strength was not significantly related to closeness,  $F(1, 101) = 1.72, p = .193, R^2 = .02, \beta = .13$ . A second regression was conducted to explore the relation between closeness with an offender and GNAT scores. In the regression, GNAT implicit criminal-other scores were entered in the first step, and mean-centered closeness scores were entered in the second step. GNAT implicit criminal-self GNAT scores were not significantly related to closeness,  $\Delta F(2, 81) = 1.69, p = .198, R^2 = .41, \beta = .11$ . Hypothesis 8 was not supported.

To test Hypothesis 9 a regression was used to explore the relation between closeness with an offender and explicit criminal-self association strength. In the regression racial-ethnic identification was entered in the first step, and mean-centered closeness scores entered in the second step. Explicit criminal-self association strength was not significantly related to closeness,  $F(2, 100) = .21, p = .965, R^2 = .08, \beta = .01$ . Hypothesis 9 was supported.

### **Exploratory closeness analyses.**

Due to the nature of the manipulation, the type of experience that participants were reminded of was expected to strengthen or attenuate implicit criminal-self association strength. However, the results did not demonstrate a main effect of the type of reminders of past experiences on IAT or GNAT scores. However, this effect may be moderated by feelings of closeness. Indeed self-expansion theory posits that not only are experiences with others important, but feelings of closeness. As such, exploratory analyses were conducted to test the combined effect of closeness and experience condition on IAT and GNAT scores. First, analyses were conducted in which the IAT

implicit criminal-self association scores served as the dependent variable. Then, the same analyses were conducted in which GNAT implicit criminal-self association scores served as the dependent variable. Finally, analyses were conducted in which explicit criminal-self association strength scores served as the dependent variable.

*IAT scores.* First, a regression was used to test the effect of closeness and experience condition on implicit criminal-self association strength. The purpose of this analysis was to examine whether the positive experience, negative experience, and no reminder condition varied from each other. In the regression mean-centered closeness scores and experience condition (coded positive = 1, negative = 0, no reminder = -1) were entered in the first step and their interaction term in the second step. There was neither a significant main effect of closeness,  $\Delta F(2,100) = .91, p = .390, R^2 = .02, \beta = .09$ , nor a significant main effect of the manipulation,  $\Delta F(2,100) = .91, p = .864, R^2 = .02, \beta = .02$ . Regression analyses yielded a marginally significant Closeness X Manipulation interaction,  $\Delta F(3, 99) = 3.16, p = .079, R^2 = .05, \beta = .18$ . The results of this regression are graphed in Figure 5.

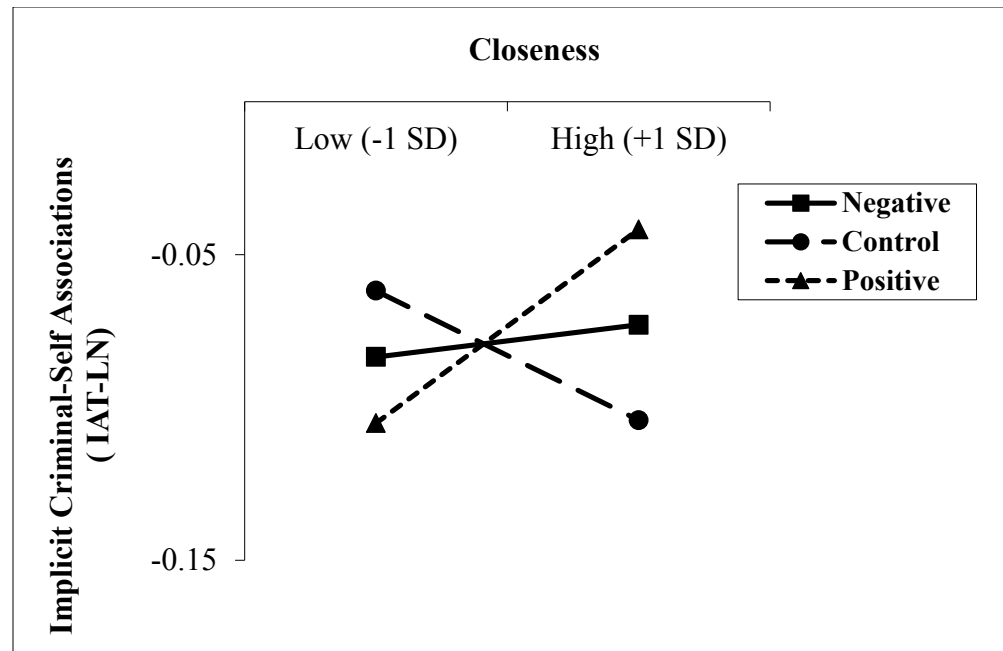


Figure 5. Effect of reminders of past experiences and closeness on implicit criminal-self associations.

Note: Interaction effect plotted at 1 SD above and below the mean of closeness (Aiken & West, 1991). Larger IATLN scores indicate stronger associations between the self and criminal.

Simple slopes analyses were employed to unpack the interaction. Following Aiken and West (1991), planned contrasts were created to test the combined effects of reminders of past experiences and closeness on implicit criminal-self associations. To examine whether the positive experience condition and the negative experience condition varied from baseline (no reminder condition), two dummy variables were created: (a) positive experience condition coded 1 and the other two conditions (negative experience and no reminder conditions) coded 0, and (b) negative experience condition coded 1 and the other two conditions (positive experience and no reminder conditions) coded 0. Because they are entered simultaneously in the regression analysis, the first contrast examines whether the positive experience condition differs from the no reminder condition, while controlling for the negative experience condition, and the second

contrast tests whether the negative experience condition differs from the no reminder condition, while controlling for the positive experience condition. Next, implicit and explicit criminal-self association scores were regressed on the positive experience versus no reminder contrast, and the negative experience versus no reminder contrast, closeness (centered), and the two interactions (computed by multiplying closeness centered scores by each contrast). The regression revealed significant Closeness X Positive Experience,  $\beta = .34, p = .047$ , and Closeness X Negative Experience,  $\beta = .34, p = .044$ , interactions.

To examine this interaction, simple slope analyses were used in which implicit criminal-self associations were estimated at 1 *SD* above and below the mean on closeness for the two experience conditions; specifically, a.) positive vs. negative and no reminder conditions and b.) negative versus positive and no reminder conditions. Among participants high in closeness, participants in the positive experience condition did not vary in implicit criminal-self association strength when compared to those who were not reminded of past experiences, while controlling for those in the negative experience condition,  $\beta = .17, p = .110$ . Also, among participants low in closeness, participants in the positive experience condition did not vary in implicit criminal-self association strength when compared to those who were not reminded of past experiences, while controlling for those in the negative condition,  $\beta = -.25, p = .187$ . Among participants high in closeness, participants in the negative experience condition did not vary in implicit criminal-self association strength when compared to those who were not reminded of past experiences, while controlling for those in the positive experience condition,  $\beta = .27, p = .132$ . Also, among participants low in closeness, participants in the negative experience condition did not vary in implicit criminal-self association

strength when compared to those who were not reminded of past experiences, while controlling for those in the positive condition,  $\beta = -.26, p = .148$ . Moreover, there were no within group differences. Among participants who were reminded of positive experiences, implicit criminal-self association strength did not vary between participants high in closeness compared to those low in closeness,  $\beta = .23, p = .169$ . Among participants who were reminded of negative experiences, implicit criminal-self association strength did not vary between participants high in closeness compared to those low in closeness,  $\beta = .27, p = .108$ . Among participants who were not reminded of a past experience, implicit criminal-self association strength did not vary between participants high in closeness compared to those low in closeness,  $\beta = -.29, p = .148$  (see figure 5).

Because participants who were reminded of a positive and negative experience exhibited similar patterns in implicit criminal-self association strength, a second set of analyses were conducted to examine the effect of being reminded of a past experience, regardless of the type of reminder. Moreover, given the small sample size within each group, it may be the case that there were not enough participants between the three conditions to detect any between group differences. To this end, another regression was used. In the regression, mean-centered closeness scores and experience condition (coded positive or negative experience= 1, no reminder =0) were entered in the first step and their interaction term in the second step. Consistent with the prior analysis, there was neither a significant main effect of closeness,  $\Delta F(2,100) = .296, p = .167, R^2 = .02, \beta = -.30$ , nor a significant main effect of the manipulation,  $\Delta F(2,100) = .89, p = .955, R^2 = .02, \beta = .01$ . Regression analyses did yield a significant Closeness X Manipulation interaction,

$\Delta F(3, 99) = 5.11, p = .026, R^2 = .07, \beta = .48$ . Table 4 summarizes the regression results.

The results of this regression are graphed in Figure 6.

*Table 4. Hierarchical Multiple Regression Analyses Predicting Implicit Criminal-Self Association IAT scores from Closeness and Experience Condition Manipulation*

	<i>Model 1</i>	<i>Model 2</i>
Closeness	.13 (.10)	-.30 (.21)
Manipulation	.03 (.10)	.01 (.10)
Closeness X Manipulation		.48* (.21)
$R^2$	.02	.07*
Adjusted $R^2$	-.01	.04
No. Observations	103	

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ .

Simple slope analyses were used to examine these interactions and estimated implicit criminal-self associations at 1 *SD* above and below the mean on closeness for the three conditions. There was a marginally significant difference in implicit criminal-self association strength between participants high in closeness who received the positive or negative experience manipulation when compared to those who were not reminded of past experience,  $\beta = .25, p = .077$ . Also, among participants low in closeness, implicit criminal-self associations did not vary between participants who received the positive or negative experience manipulation, when compared to those who were not reminded of a past experience,  $\beta = -.23, p = .125$ . Moreover, there was a within group effect, for participants who were reminded of a past experience. Among participants who were reminded of a past experience, participants high in closeness exhibited significantly stronger implicit criminal-self association strength compared to those low in closeness,  $\beta$



$= .25, p = .032$ . Among participants who were not reminded of a past experience, implicit criminal-self association strength did not vary between participants high in closeness compared to those low in closeness,  $\beta = -.29, p = .148$  (see figure 6).

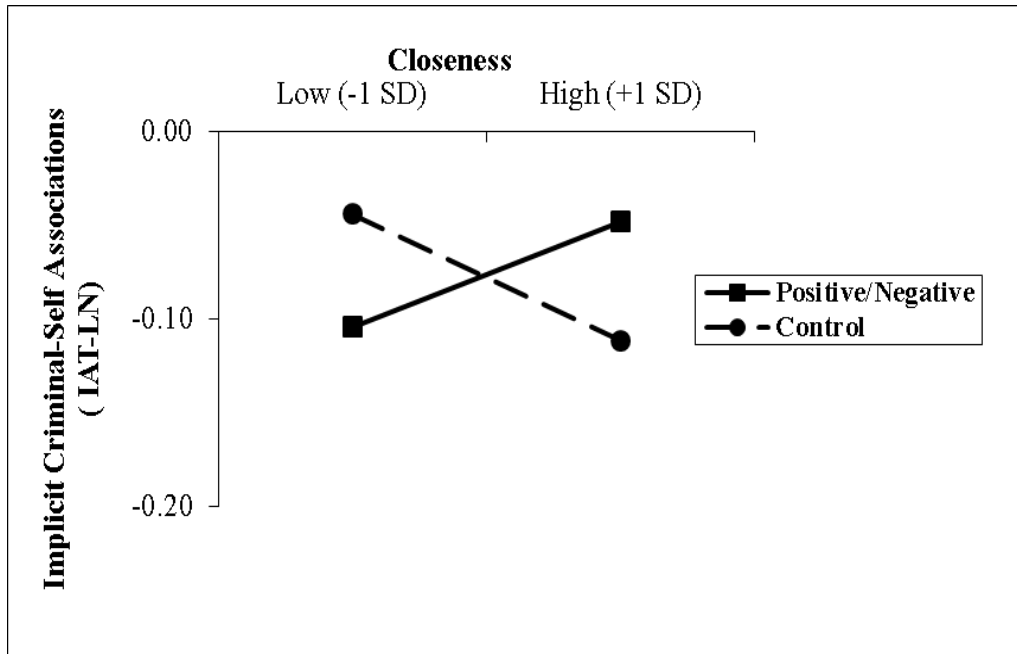


Figure 6. Combined effect of reminders of past experiences and closeness on implicit criminal-self associations.

Note: Interaction effect plotted at 1 SD above and below the mean of closeness. Larger IATLN scores indicate stronger associations between the self and criminal.

*GNAT scores.* First, a regression was used to test the effect of closeness and experience condition on implicit criminal-self association strength. The purpose of this analysis was to examine whether the positive experience, negative experience, and no reminder condition varied from each other. In the regression implicit criminal-other GNAT scores were entered in the first step, mean-centered closeness scores and experience condition (coded positive = 1, negative = 0, no reminder = -1) were entered in the second step and their interaction term in the third step. There was neither a significant main effect of closeness,  $\Delta F(3,80) = .90, p = .207, R^2 = .41, \beta = .11$ , nor a significant main effect of the manipulation,  $\Delta F(3,80) = .90, p = .714, R^2 = .41, \beta = -.03$ .

There was no significant Closeness X Manipulation interaction,  $\Delta F(4, 79) = .42, p = .518, R^2 = .41, \beta = .06$ . No further analyses were conducted.

*Explicit criminal-self association strength.* First, a regression was used to test the effect of closeness and experience condition on explicit criminal-self association strength. The purpose of this analysis was to examine whether the positive experience, negative experience, and no reminder condition varied from each other. In the regression racial-ethnic identification was entered in the first step, mean-centered closeness scores and experience condition (coded positive = 1, negative = 0, no reminder = -1) were entered in the second step and their interaction term in the third step. There was neither a significant main effect of closeness,  $\Delta F(3,99) = .10, p = .980, R^2 = .08, \beta = .01$ , nor a significant main effect of the manipulation,  $\Delta F(3,99) = .10, p = .654, R^2 = .08, \beta = -.04$ . Regression analyses did not yield a significant Closeness X Manipulation interaction,  $\Delta F(4, 98) = 1.10, p = .298, R^2 = .10, \beta = -.10$ . No further analyses were conducted.

*Post hoc power analyses.* G\*Power 3.1 (Faul et al., 2009) was used to conduct a *post hoc* power analysis. Two separate power analyses were conducted due to the smaller sample size for analyses involving the GNAT (see above for discussion on GNAT sample size). The first analysis was conducted to determine the power of analyses in which the IAT implicit criminal-self association scores and explicit criminal-self association scores served as the dependent variables. For a multiple regression, omnibus,  $R^2$  deviation from zero, sample size of 103, two tested predictors (feelings of closeness and experience condition), effect size of  $f^2$  at .25, and alpha at .05, G\*Power calculated a robust power of .996. For the power analysis in which GNAT implicit criminal-self association scores

served as the dependent variable, the same parameters were set, however sample size was set at 84. G\*power calculated a robust power of .986.

## **Discussion**

Study 1 examined the effect of personal relationships with offenders on the self-concept of family members and friends. Moreover, Study 1 examined the effect of the specific conditions in relationships with offenders that may affect cognitions, specifically reminders of past experiences, nature of the relationship, and feelings of closeness with an offender. Study 1 tested self-expansion using a sample of family and friends of offenders to examine implicit and explicit criminal-self associations, potential consequences of self-expansion with the group criminal. To measure implicit criminal-self association strength, Study 1 utilized two implicit measures, the GNAT and the IAT. Generally, both measures yielded the same results. There was no effect of having a relationship with an offender on implicit criminal-self association strength (Hypothesis 1). Moreover, reminders of a past experience (Hypothesis 3), the nature of the relationship (Hypothesis 6), and feelings of closeness (Hypothesis 8) with an offender did not have a main effect on implicit criminal-self association strength. As predicted there was no difference between those who have a relationship with an offender and those who do not on explicit criminal-self association strength (Hypothesis 2). Moreover, there was no significant effect of reminders of a past experience (Hypothesis 4), the nature of the relationship (Hypothesis 7), and feelings of closeness (Hypothesis 9) with an offender on explicit criminal-self association strength. Also, there was no significant relationship between implicit and explicit measures of criminal-self association strength among participants who had a relationship with an offender (Hypothesis 5). Among participants

who did not have a relationship with an offender, although there was no relationship between the GNAT and measure of explicit criminal-self association strength, there was a weak relationship between the IAT and measure of explicit criminal-self association strength (Hypothesis 10).

Although Study 1 is similar to past self-expansion research in that it examines the effects of personal relationships on the self-concept, it extends existing research by examining self-expansion with a negative acquired group status, that of criminal, rather than self-expansion with positive acquired traits or ascribed traits. As predicted, explicit criminal-self association strength did not differ based on having a relationship, reminder of a past experience, nature of the relationship, and closeness with an offender. This differs from previous examinations of self-expansion that find that relationships can impact explicit cognitions. Due to the negatively perceived status of being an offender, people may be reluctant to explicitly report on their associations with the group criminal. Also, people who have personal relationships with offenders learn about the social and legal consequences of being labeled a criminal and the perceptions of others towards offenders, which may further increase social desirability concerns. Although past self-expansion research has examined self-expansion with groups that may be negatively perceived, such as racial-ethnic groups, these categories represent an ascribed group status. Ascribed statuses are those that are beyond control of the individual, whereas acquired statuses are based on a person's actions. Given this distinction, the consequences of self-expansion with offenders may not be the same as self-expansion with positive acquired traits or ascribed groups.

Although results show that there was no main effect of relationship, reminder of past experience, nature of the relationship, and feelings of closeness on implicit criminal-self association strength, exploratory analyses yielded a significant effect of reminders of a past experience conditional on closeness on implicit criminal-self association strength. Among participants who were high in closeness, participants who were reminded of a past experience, regardless of the reminder being positive or negative, exhibited stronger IAT implicit criminal-self association strength than those who were not reminded of a past experience. Moreover, participants were reminded of a past experience, regardless of the reminder being positive or negative, exhibited stronger IAT implicit criminal-self association strength in comparison to participants who were reminded of past experiences, but were low in closeness. It is important to note that participants were not necessarily associating themselves with the group criminal, rather participants exhibited less cognitive distance between their self-concept and the group criminal in comparison to participants who were high in closeness but were not reminded of a past experience. There was no effect of feelings of closeness for those who were not reminded of a past experience.

One potential explanation for this may be that in personal relationships, people have a variety of experiences, some positive, and some negative, but regardless of these experiences, people still feel close to the other person. Therefore regardless of the type of experience participants were reminded of, the combination of salient memories and feelings of closeness predicted implicit criminal-self association strength, rather than salient memory or feelings of closeness alone. Moreover, this finding highlights the importance of salient memories in guiding cognitions. This is in line with past research

that finds that among people who have close cross-group friends, only those who are reminded of their cross-group friend exhibited associations with their close cross-group friend in comparison to participants who were not reminded (Page-Gould et al., 2010a). This would suggest that implicit criminal-self association strength of those who have relationships with offenders is malleable. That is, in relationships where people feel close to an offender, contexts in which the offender is brought to the forefront of one's memory can at least temporarily strengthen implicit criminal-self associations.

The above effect was not found when GNAT implicit criminal-self association scores served as the dependent variable. This could be attributed to the fact that the GNAT and IAT may be accessing different aspects of cognitions. The IAT is a relative measure, and may access cognitions in terms of their relative standing in comparison to another category (Nosek & Banaji, 2001). The IAT in the present study measures association strength between self and criminal relative to other and criminal. The presence of a contrasting category may increase the effect of the dependent variable (Greenwald et al., 2002). In contrast, the GNAT does not require relative comparisons but is based on cognitions towards one category (Nosek & Banaji, 2001). In the present study, GNAT scores reflect associations between self and criminal only, without taking into account associations towards other and criminal. Due to the properties of each measure, this affects the representation of cognitions (Bosson et al., 2000; Nosek & Banaji, 2001). This is further corroborated by results that demonstrate that IAT and GNAT scores are not related for all participants, the subsample of participants who had a relationship with an offender, and for the subsample of participants who did not. While the relation between both measures is in the expected direction, it was not significant.

In addition, both implicit measures were not related to the explicit criminal-self association measure, for participants who had a relationship with an offender. For the subsample of participants who did not have a relationship with an offender, only GNAT scores were not related to the measure of explicit criminal-self associations. For this subsample, IAT scores were related to explicit criminal-self association scores, albeit weakly. This is consistent with past research which demonstrates that implicit and explicit measures are weakly related or unrelated in investigations of socially sensitive subjects such as race or sexuality (Greenwald et al., 2009a). One might anticipate that because there was no difference in implicit and explicit criminal-self association strength between those who have a relationship with an offender and those who do not, that implicit and explicit measures should be related. However, implicit social cognition theory suggests otherwise because implicit and explicit cognitions are derived from different processes (Greenwald & Banaji, 1995). In this study too, implicit and explicit measures are not related for all participants, among the subsample of participants who had a relationship with an offender, and the subsample of participants who did not.

This study extends both criminological and social psychological research in several ways. First, this research adds to the criminological literature centered on the collateral consequences of criminal justice experiences in three ways. The present study; 1) tests the effect a close other's arrest, conviction, and/or incarceration on non-criminal individuals embedded in the social networks of offenders, 2) examines the effects of these experiences on immediate family, friends, and extended family, and 3) examines the cognitive consequences of personal relationships with offenders. Study 1 establishes that people in personal relationships with offenders can exhibit differences in implicit

criminal-self association strength, not based on their own criminal justice experiences but based on those of a close other. This adds to our understanding of the collateral consequences of criminal justice involvement of close others.

Finally, this study leaves some critical questions unanswered. This study cannot answer the key question about the effect of the offender's implicit criminal identity strength on self-expansion. People have multiple identities, and for offenders, a criminal identity is one of several other identities. How does the centrality of an implicit criminal identity of the offender affect the extent to which non-criminal individuals within their social network self-expand with the group criminal? Moreover, how does the strength of an implicit criminal identity of the offender affect the extent to which non-criminal individuals within their social network self-expand with the group criminal? Although offenders may exhibit an implicit criminal identity, they may not be actively engaged in criminal behavior (Maruna, 2001). Therefore it is unclear whether self-expansion occurs under circumstances in which the offender is actively engaged in criminal behavior or not. Therefore, this study is limited in its scope with regards to understanding the conditions in relationships with offenders under which the cognitions of family members and friends are affected.



## **Chapter 5: Professional Relationships with Offenders Predict Self-Expansion (Study 2)**

Study 2 focuses on the cognitive consequences of the parole officer-parolee relationship on parole officers. This study is the first of its kind to examine implicit associations of criminal justice practitioners, specifically parole officers, with individuals in the criminal justice system. Study 2 extends Study 1, and tests self-expansion theory among parole officers, a group that has professional relationships with parolees (a subgroup of the group criminal), as opposed to personal relationships with offenders. In addition to differences in the nature of their relationship with offenders, parole officers do not have relationships with one offender, rather their occupational function requires them to develop multiple relationships with parolees and frequently interact with several parolees on a daily basis. Within their relationships with parolees, parole officers have the ability to engage in close and positive experiences with them as they perform their occupational function. The goals of Study 2 are to test 1) self-expansion theory as a potential cognitive mechanism that facilitates implicit associations between the self-concept of parole officers and the group parolees and 2) the conditions which strengthen or attenuate implicit associations between the self-concept of parole officers and the group parolees.

This chapter begins by providing an overview of the current research centered around the impact of the parole officer-parole relationship on parolees and parole officers. The limitations of the current research are then discussed. Following this is a discussion of the application of self-expansion to professional relationships; then more specifically to self-expansion in the parole officer-parolee relationship. Potential

moderating factors are also considered. The methodology and results of Study 2 are then presented, and the chapter concludes with a discussion of the findings.

### **The Parole Officer-Parolee Relationship**

At year-end 2016, there were 874,800 parolees under supervision (Bureau of Justice Statistics, 2018b); the highest in United States history. The historical role of parole is to assist individuals recently released from prison in successful reentry into society and in completing the terms of their release (e.g., maintaining employment and stable housing, abstaining from alcohol and drugs). Parole officers are responsible for monitoring those under parole supervision, responding to their criminogenic and non-criminogenic needs, and ensuring community safety (National Research Council, 2008; Seiter, 2002).

In the parole officer-parolee relationship, parole officers have the unique ability to function as agents of change who encourage parolees to comply with the conditions of parole, engage in specialized programs, and promote pro-social behaviors and identities (Abadinsky, 2009; Gibbons & Rosecrance, 2005). The effectiveness of the parole officer-parolee relationship is dependent on the parole officer's ability to create and maintain positive relationships with their parolees (Dowden & Andrews, 2004; Home Office, 2007; Landerberger & Lipsey, 2005; Morash, Kashy, Smith, & Cobbina, 2014). Positive parole officer-parolee relationships are characterized as those in which parole officers are firm but fair (Ireland & Berg, 2007). Evidence based practices in community corrections highlight the importance of practitioner-client relationships characterized by warmth, empathy, respect, and support (Andrews, 2011; Dowden & Andrews, 2004). In these relationships parole officers connect and collaborate with offenders, model pro-social

behavior, communicate effectively, and apply motivational techniques (Walters, Clark, Gingerich, & Meltzer, 2007). Positive parole officer-parolee relationships foster bonding, closeness, and trust between both parole officers and parolees (Ross, Polaschek, & Ward, 2008; Ireland & Berg, 2007). This type of relationship may provide the necessary contexts for offenders to transform their identities and cognitions from that of a “criminal” to a “pro-social” individual (see, for example, the current emphasis on Motivational Interviewing, McMurren, 2009). Interviews with parolees consistently demonstrate that positive relationships with their parole officers facilitated pro-social cognitive changes (e.g., identity shifts; Bui & Morash, 2010; Giordano et al., 2007; Morash, Kashy, Smith & Cobbina, 2014; Stone, Morash, Goodson, Smith & Cobbina, 2016).

In contrast, negative parole officer-parolee relationships are characterized as authoritarian, unsupportive, inflexible, and controlling (Stone et al., 2016). Negative parole officer-parolee relationships have been found to be related to confrontation and noncompliance with the terms of supervision (Chamberlain, Gricius, Wallace, & Borjas, & Ware, 2017; Ireland & Berg, 2007; Morash et al., 2014). Importantly, negative parole officer-parolee relationships are not conducive to pro-social cognitive changes (Morash et al., 2014; Stone et al., 2016). Taken together, this research demonstrates the influence of the parole officer-parolee relationship on the cognitions and behaviors of parolees.

A small body of research has examined the consequences of the parole officer-parolee relationship on parole officers. These studies demonstrate the mental health (for example, see Lewis, Lewis, & Garby, 2012) and behavioral (for example, see Ireland & Berg, 2007) consequences of professional relationships with parolees on parole officers.

However, these studies do not address the cognitive consequences of this relationship on parole officers.

Although the above literature on the parole officer-parolee relationship can inform how experiences within the parole officer-parolee relationship can affect both parolees and parole officers, it has predominately focused on the consequences of this relationship on parolees. Moreover, with regard to cognitions, the extant research has focused exclusively on the cognitive consequences of the parole officer-parolee relationship on parolees. This begs the question, if experiences in the parole officer-parolee relationship have an impact on the cognitions of parolees, can these experiences also impact the cognitions of parole officers? Specifically, how do experiences in the parole officer-parolee relationship impact the way parole officers view themselves in relation to those whom they supervise?

In addition, the current research has also relied on self-report measures to examine how experiences in the parole officer-parolee relationship impact parole officers and parolees, which pose a number of limitations (see Chapter 2), especially when utilizing parole officer samples. First, questions surrounding how parole officers view themselves in relation to parolees may be a socially sensitive subject for parole officers. Given the hierarchical distinction between parole officers in relation to parolees, parole officers may be reluctant to express how their experiences with parolees impact how they view themselves. Self-categorization theory would suggest that parole officers may explicitly highlight their similarities with their ingroup (parole officers) and emphasize the differences between themselves and the outgroup (parolees). Second, parole officers may mistrust researchers and/or their supervisors and may be unwilling to provide

accurate responses (Feder, Jolin, & Feyerherm, 2000). Finally, officers may be unaware of how their experiences with parolees have affected their cognitions. Therefore, self-report measures may reflect social desirability concerns of officers (Moorman & Podsakoff, 1992) and an inability to fully articulate the effects of their experiences.

To address these limitations, Study 2 will examine the cognitive consequences of relationships with parolees on the self-concept of parole officers. Similar to Study 1, Study 2 adopts an IAT to test if parole officers' experiences affect self-expansion with parolees. Study 2 examines one potential consequence of self-expansion in the parole officer-parolee relationship, the extent to which parole officers exhibit implicit associations with parolees.

### **Professional Self-Expansion**

Most of the self-expansion research has primarily focused on self-expansion in personal relationships (see Chapter 2). To the author's knowledge, one study has examined self-expansion within the context of people's occupations (McIntyre et al., 2014). The study employed a 14-item self-expansion questionnaire to measure the extent to which people exhibited self-expansion with their occupation as a whole. McIntyre and colleagues (2014) found that people can indeed self-expand with their occupation.

Study 2 differs from and builds on McIntyre and colleagues' (2014) study in several important ways. First, Study 2 adopts a different theoretical approach (reviewed in Chapter 2) guided by the perspectives of implicit social cognition theory and uses implicit measures, specifically the IAT. In addition, although McIntyre and colleagues' (2014) focused on self-expansion with people's occupations as a whole, they suggest that people can self-expand with others with whom they interact with in the workplace if the

interactions meet the pre-requisites of self-expansion. Study 2 extends their work and examines the extent to which parole officers self-expand with the group parolee, a group which parole officers frequently interact with in the work place by measuring implicit criminal-self associations, one potential consequence of self-expansion with parolees.

**Implicit criminal-self associations.** The present study adopts an implicit social cognition approach and utilizes an IAT to measure associations between the self-concept of parole officers with the group criminal. For the purposes of the present study, the group parolee is considered a sub-group of the group criminal. Prior to becoming a parolee, a person must first be convicted of a crime (and incarcerated), therefore being labeled as a criminal. Moreover, during a first introduction, parole officers are made aware of a parolee's criminal history, thus being introduced initially as an offender, which may have lasting effects on how parole officers see their parolees. Initial presentations have been found to have a lasting effect in memory (Jones, 1990) suggesting that parole officers may think of parolees as offenders. Therefore Study 2 uses methodology which measures parole officers' associations with the group criminal, which serves as a proxy for the group parolee.

### **Self-Expansion in Parole Officers**

Using the same logic that underpins previous examinations of self-expansion, parole officers may experience self-expansion through close, frequent, and positive experiences with parolees. The parole officer-parolee relationship may foster a sense of closeness between parole officers and their parolees in that they may view the success or short-comings of their parolees as their own, reflecting a sense of interconnectedness. Although parole officers do not frequently interact with one parolee, they frequently

interact with multiple parolees on a daily basis as a function of their occupational role (DeMichele, 2007). On average, parole officers spend 76 hours a month working directly with parolees (DeMichele, 2007). McIntyre and colleagues (2017) suggest that interactions with people in the work place, including consumers, can result in self-expansion with those individuals. They suggest that self-expansion can occur as a result of interactions with a group of people that individuals engage with in the workplace and can acquire resources, perspective, and characteristics. In the parole officer-parolee relationship parolees can provide parole officers with information and knowledge about themselves personally and the general group of parolees, their thoughts, and behaviors. This provides parole officers with opportunities to self-expand with aspects of parolees, thereby impacting their cognitions. Finally, in the parole officer-parolee relationship, parole officers have the potential to engage in positive experiences with their parolees as they support their reintegration into society. In circumstances where such close, frequent, and positive experiences exist, self-expansion is likely to occur. Study 2 tests the following hypothesis: parole officers who are reminded of positive experiences with a parolee are predicted to exhibit stronger implicit criminal-self associations in comparison to those who are reminded of negative experiences (Hypothesis 3). In the absence of measures of persistent close, frequent, and positive experiences, similar to Study 1, an experimental manipulation of a memory of a positive or negative experience with parolees is used to test whether implicit criminal-self associations differs based on salient experience.

## Theoretical Moderators

Experiences in the parole officer-parolee relationship may to some degree be dependent on the professional characteristics of the parole officer (Walters et al., 2007, Seiter & West, 2003). Consistent with role identity theory, roles that individuals take on, such as occupation, are one facet of an individual's self-concept and may impact a person's cognitions (Stryker & Burke, 2000). For parole officers, professional orientation and the extent to which parole officers identify with their occupation group are facets of their professional identity which may moderate the relation between reminders of past experiences and implicit criminal-self associations.

*Parole officer orientation.* Parole officer orientation ranges along a continuum from strict law enforcement and surveillance for the purpose of community safety to therapeutic for the purpose of parolee support, rehabilitation, and successful desistance (Seiter & West, 2003; Sigler & McGraw, 1984). Parole officer orientation guides officers in how they perform their jobs and therefore may influence the types of experiences that parole officers have with parolees. Surveillance restricts and controls parolee behavior to ensure that individuals fulfill the responsibilities and conditions of parole. This orientation has been found to be related to low levels of trust and cooperation which may negatively impact experiences between parole officers and parolees (Fulton, Stichman, Travis, & Latessa, 1997; Seiter, 2002).

Conversely, parole officers who take on a therapeutic role may be more likely to have positive experiences with their parolees as this orientation requires the parole officer to deeply engage with parolees, and aid them in addressing criminogenic obstacles (e.g., mental health problems, substance abuse, physical health conditions, inadequate



educational and employment skills, lack of stable housing, and problematic relationships) (National Research Council, 2008; Petersilia, 2003; Seiter, 2002). A therapeutic orientation emphasizes elements of trust, caring, and fairness, factors which have been found to be related to positive experiences between parole officers and parolees (Blasko et al., 2015; Ireland & Berg, 2007). Therefore, professional orientation is may moderate the relation between reminders of past experiences and implicit criminal-self associations. Specifically, it is predicted that among parole officers who take on a therapeutic orientation, those who are reminded of positive experiences with a parolee, will exhibit stronger implicit criminal-self associations in comparison to those who do not take on a therapeutic orientation (Hypothesis 11).

*Parole officer subjective group identification.* In addition to professional orientation, parole officers vary in the extent to which they identify with their occupational group. According to social identity theory, people can identify with the social groups to which they belong, including occupational groups (Hogg & Turner, 1987). Moreover, while people can be categorized into social groups, they vary in the extent to which they identify with their social groups (Sellers, Rowley, Chavous, Shelton, & Smith, 1997). The extent to which people identify with their occupational groups may reflect commitment (Ellemers & Rink, 2005) and is related to positive workplace behavior such as job performance (Becker & Kernan, 2003; Meyer, Stanley, Herscovitch, & Topolnysky, 2002). By extension, group identification with parole officers may influence the types of experiences parole officers have with parolees. For example, those who strongly identify as a parole officer may be more committed to their role in assisting parolees in successful reentry, which may impact their experiences with parolees.

Therefore, the extent to which parole officers identify with their occupational group may moderate the relation between reminders of past experiences and implicit criminal-self associations. Specifically, it is predicted that among parole officers who strongly identify with their occupational group, those who are reminded of positive experiences with a parolee, will exhibit stronger implicit criminal-self associations in comparison to those who do not strongly identify with their occupational group (Hypothesis 12).

### **Study Overview**

Study 2 extends Study 1 and tests whether parole officers, a group that has direct, but professional relationships with offenders can exhibit implicit criminal-self associations. Implicit criminal-self association strength is measured using the same IAT used in Study 1. Also similar to Study 1, Study 2 tests the conditions which may strengthen or attenuate implicit criminal-self associations. Specifically, Study 2 examines the effects of past experiences on implicit criminal-self associations of parole officers using an experimental manipulation procedure. Parole officers will be reminded of a memory of a positive or a negative experience with a parolee, which is expected to either strengthen or attenuate implicit criminal-self associations. Lastly, because professional characteristics of parole officers are likely to impact the types of experiences parole officers have with parolees, Study 2 explores the moderating effect of parole officer orientation and parole officer group identification on the relation between reminders of past experiences and implicit criminal-self associations. Tables 5 and 6 outline the general and study specific research questions and hypotheses tested in Study 2.

*Table 5. General research questions and related hypotheses tested in Study 2.*

<b>Research Question #2: What are the conditions under which implicit and explicit criminal-self associations are strengthened versus attenuated?</b>
H <sub>3</sub> : Parole officers who are reminded of positive experiences with a parolee are predicted to exhibit stronger <i>implicit</i> criminal-self associations in comparison to those who are reminded of negative experiences.

*Table 6. Study specific research questions and related hypotheses tested in Study 2.*

<b>Research Question #6: What are the professional characteristics of parole officers which may moderate the relation between reminders of past experiences and implicit criminal-self associations?</b>
H <sub>11</sub> : It is predicted that among parole officers who take on a therapeutic orientation, those who are reminded of positive experiences with a parolee, will exhibit stronger implicit criminal-self associations in comparison to those who do not take on a therapeutic orientation.
H <sub>12</sub> : It is predicted that among parole officers who strongly identify with their occupational group, those who are reminded of positive experiences with a parolee, will exhibit stronger implicit criminal-self associations in comparison to those who do not strongly identify with their occupational group.

### **Participants and Design**

All New Jersey parole officers (N=258) were invited to participate in this study; first via an on-line platform (to which 18 responded) and then through face to face invitations to officers on duty at district offices (to which an additional 69 participated) (see table 7). All data were collected anonymously and participants volunteered to complete the study without any incentive. The experiment employed a one-factor two-level (Parole officer-parolee experience condition: positive vs. negative) between-participants design.

Eighty-seven active New Jersey State parole officers completed the experiment. Three participants' data were excluded from analyses due to reaction time error rates on the IAT (described below) that were greater than 30% overall or over 40% on any given

block (as recommended by Greenwald et al., 2003). The final sample consisted of 84 parole officers (28 females, 55 males, 1 other<sup>1</sup>,  $M_{\text{age}} = 37.10$ ,  $SD_{\text{age}} = 7.39$ , age range: 25-54 years). Approximately 49% percent of officers identified as White, 26% were Hispanic, 13% were Black, 11% were another ethnicity not listed, and one percent identified as Asian or Pacific Islander. On average, parole officers had been working in their position for nearly nine years ( $M_{\text{yearsparole}} = 8.64$ ,  $SD_{\text{yearsparole}} = 6.634$ , range: 1-25 years). Approximately 51% of officers were from the sex offender management unit, 35% of parole officers were from a traditional unit, and 14% were from other units. Approximately 18% of parole officers had a criminal history (i.e., arrest, conviction, and/or incarceration) (see Table 8).

*Table 7. Data Collection Sites.*

District Office	Region	Number of Officers in each Office	Number of Officers that Completed the Study	Number of Trips to Office
Online	--	258 (Total number of line officers)	18	--
DO 1	Northern New Jersey	70	19	3
DO 2	Northern New Jersey	39	14	3
DO 3	Central New Jersey	66	27	3
DO 4	Central New Jersey	9	6	1
DO 5	Northern New Jersey	27	3	1
DO 6	Southern New Jersey	17	0	1
Total number of participants	--	--	87	--

*Table 8. Characteristics of Sample Participant (N=84).*

	%	<i>M</i> (SD)
Gender		
Male	65.5	--
Female	33.3	--
Age	--	37.10 (7.39)
Race/Ethnicity		
White	48.8	--
Hispanic/ Latino	26.2	--
African American	13.1	
Other	10.7	--
Asian or Pacific Islander	1.2	--
Years Parole	--	8.6(6.63)
Caseload Type		
Sex Offender Management	51.2	--
Unit		
Traditional	34.5	--
Other	14.3	
Criminal History	17.9	

The average caseload for officers was approximately 50. Officers were expected to conduct three face to face interactions per month (including one home visit) per individual. However, it is important to bear in mind that these were the minimum standards per parolee and officers had the discretion to meet with parolees as frequently as deemed fit given the circumstances. Officers had the ability to interact with parolees in a variety of contexts ranging from the parole office to counseling locations to transporting parolees to important appointments.

### **Manipulated Variable**

**Positive versus negative parole officer-parolee experience.** Similar to Study 1, the purpose of the manipulation was to make salient an experience parole officers have had with a parolee. Parole officers were randomly assigned to vividly re-experience either a positive or a negative experience with a parolee. Participants in the positive experience condition were given the following prompt: “Please imagine a positive

interaction you have had with a parolee. Please describe the positive experience as well as your thoughts and feelings during this positive interaction. Please provide details and write freely.” Participants in the negative experience condition were given the same prompt, but were asked to focus on a negative interaction. Fifty-two percent of parole officers were randomly assigned to the positive experience condition and 48% to the negative experience condition.

### **Measured Variables**

**Implicit criminal-self associations.** See Chapter 3.

**Subjective group identification with parole officers.** Participants indicated the extent to which they identified with their professional group. Parole officers were asked to think about their identification with other parole officers and respond to two items (“Being a parole officer is an important part of who I am” and “Being a parole officer is important to my sense of self”) on a 7-point scale ranging from *strongly disagree* (0) to *strongly agree* (6). The measures are highly correlated ( $r = .75, p < .001$ ) and were therefore combined into a single measure.

**Professional orientation.** Participants indicated the extent to which they adopted a professional orientation (i.e. surveillance vs. therapeutic). Guided by the Parole Officer Professional Orientation measure (Fulton et al., 1997) which was designed to assess how parole officers perform their job functions as well as their goals. Parole officers were asked to rate how they perform their job and respond to two items. In one question, parole officers were asked to respond to the following question regarding their subjective role: “The most important aspect of your job is ...” on a 5-point scale ranging from *exclusively social work* (1) to *exclusively law enforcement* (5). In the second question,

parole officers were asked to respond to the following question regarding their occupational strategy: “The most effective way to change behavior is through...” on a 5-point scale ranging from *exclusively positive reinforcement (1)* to *exclusively punitive sanctions (5)*. Higher scores on both questions indicate a stronger focus on strategies related to law enforcement  $r(84) = .39, p < .001$ . While both questions appear to be tapping into the construct of professional orientation, due to the low correlation, they appear to be accessing different facets of professional orientation. Therefore, the questions were not combined and were analyzed independently.

**Demographics.** Participants were asked to identify their gender, age, race/ethnicity, length of time as a parole officer, type of caseload, and their criminal history.

### **Procedure**

Participants were informed that the study’s purpose was to examine the relation between parole officers’ professional experiences and attitudes. First, participants received the parole officer-parolee experience manipulation followed by the IAT, the subjective group identification questionnaire, the professional orientation questionnaire, and the demographics questionnaire. Finally, participants were fully debriefed about the purpose of the study.

### **Results**

First, the mean of the dependent variable was calculated for the entire sample: implicit criminal-self association ( $M = -.09, SD = .15$ ). Zero-order correlations between the demographic variables (age, length of time as a parole officer), subjective group identification, the professional orientation measures (subjective role, occupational

strategy), and implicit criminal-self association scores were conducted for the entire sample and by each condition. The results are included in Table 9 for the entire sample and Table 10 for each condition. The relation between the categorical demographic variables (gender, race/ethnicity, type of caseload, criminal history, district office location) and implicit criminal-self association scores across the entire sample and by condition were analyzed using a series of ANOVAs. For gender, participants who identified as “other” were nominal ( $n=1$ ), so gender was coded (1 = *male*; 0 = *female, other*) to facilitate the interpretation of the results; race/ethnicity was coded (1 = *African American/Black and Hispanic*; 0 = *all others*), type of caseload was coded (1 = *sex offender unit*; 0 = *all other units*), criminal history was coded (1 = *arrested, convicted, and/or incarcerated*; 0 = *was not arrested, convicted, and/or incarcerated*), and district office location was coded (1 = *online participant/ unknown district*; 2 = *Northern New Jersey*, 3 = *Central/ Southern New Jersey*). The ANOVAs and zero-order correlation analyses revealed that no demographic and measured variables were statistically significantly related to implicit criminal-self association scores.

*Table 9. Zero-Order Correlations between Implicit Criminal-Self Association, Subjective Group Identification, Subjective Role, Occupational Strategy, and demographic factors (N=84)*

	1	2	3	4	5	6
1. Implicit Criminal-Self Association	-					
2. Subjective Group Identification	-.13	-				
3. Subjective Role	-.04	.12	-			
4. Occupational Strategy	-.18	-.12	.39**	-		
5. Age	-.02	-.39**	-.01	-.14	-	
6. Years Parole	-.06	-.48**	.06	.05	.67**	-
Overall <i>M</i>	-.09	4.40	3.15	2.87	37.10	8.64
<i>SD</i>	.15	1.41	.63	.58	7.39	6.63

\*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$



*Table 10. Zero-Order Correlations between Implicit Criminal-Self Association, Subjective Group Identification, Subjective Role, Occupational Strategy, and demographic factors*

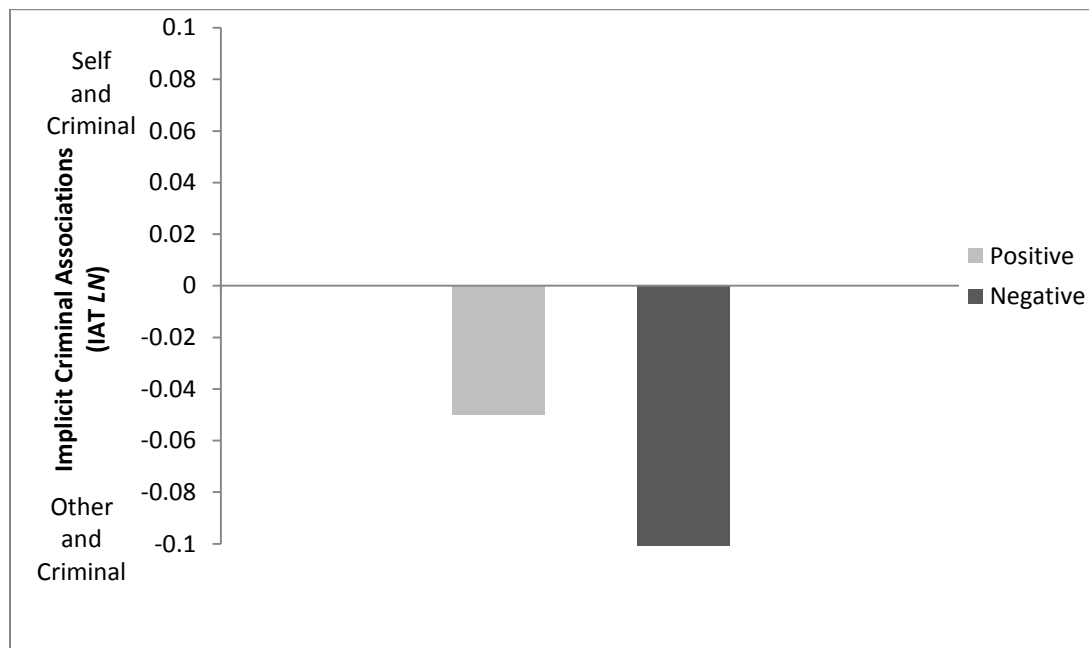
	1	2	3	4	5	6	<i>M</i>	<i>SD</i>
1. Implicit Criminal-Self Association	-	-.03	-.09	-.02	-.22	-.24	-.05	.14
2. Subjective Group Identification	-.22	-	-.09	-.19	-.43**	-.57**	4.40	1.34
3. Subjective Role	-.06	.31*	-	.46**	.04	.07	3.23	.64
4. Occupational Strategy	-.29	-.04	.35*	-	.85	.87	2.82	.54
5. Age	.13	-.36*	-.11	-.23	-	.71*	37.95	7.74
6. Years Parole	.14	-.39*	.07	.07	.66**	-	8.25	6.55
<i>M</i>	-.13	4.41	3.08	2.93	36.15	9.08	-	-
<i>SD</i>	.15	1.51	.62	.62	6.95	6.79	-	-

*Note:* Numbers above the diagonals represent correlations among those who are reminded of positive experiences ( $n=44$ ). Numbers below the diagonals represent correlations among those who are reminded of negative experiences ( $n=40$ ).

\*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$

Then, hypothesis testing was conducted with the entire sample ( $N= 84$ ). To test the effect of reminders of past experiences on implicit criminal-self associations, IAT scores (implicit criminal-self association strength) were subjected to a one-way ANOVA. In support of Hypothesis 3, participants who were reminded of a positive experience with their parolees ( $M = -.05$ ,  $SD = .14$ ) exhibited stronger associations between criminal and self when compared to those who were reminded of a negative experience with their parolees ( $M = -.13$ ,  $SD = .15$ ),  $F(1, 82) = 5.20$ ,  $p = .025$ ,  $d = .50$  (medium effect size) (see Figure 7).

Figure 7. Mean Implicit Criminal Association Scores by Parole Officer-Parolee Condition Manipulation



Note. Higher (positive) IAT LN scores indicate stronger implicit criminal-self associations.

To test Hypothesis 11, two hierarchical multiple regressions were used to explore the moderating effects of professional orientation on the relation between reminder of a past experience and implicit criminal-self associations. The first regression examined the effect of subjective role and the parole officer-parolee experience condition on implicit criminal-self associations. In the regression, mean-centered subjective role scores and parole officer-parolee experience condition (coded negative experience = 0, positive experience = 1) were entered in the first step and their interaction term in the second step. While the main effect of the manipulation was significant,  $\Delta F(2, 81) = 2.82, p = .022, R^2 = .07, \beta = .25$ , there was no significant main effect of subjective role,  $\Delta F(2, 81) = 2.82, p = .493, R^2 = .07, \beta = -.08$ . Additionally, there was no significant Subjective Role X

Manipulation interaction,  $\Delta F(3, 80) = .01, p = .929, R^2 = .07, \beta = -.01$ . The results are included in Table 11.

*Table 11. Hierarchical Multiple Regression Analyses Predicting Implicit Criminal-Self Association Strength from Parole Officer-Parolee Condition Manipulation and Subjective Role*

	<i>Model 1</i>	<i>Model 2</i>
Manipulation	.25* (.12)	.25* (.12)
Subjective Role	-.08 (.12)	-.06 (.16)
Manipulation X Subjective role		-.01 (.16)
$R^2$	.07	.07 (n.s.)
Adjusted $R^2$	.04	.03
No. Observations	84	

\*\*\* $p < .001$ , \*\*  $p < .01$ , \* $p < .05$

The second regression tested the effect of occupational strategy and the parole officer-parolee experience condition on implicit criminal-self association strength. Mean-centered occupational strategy scores and parole officer-parolee experience condition (coded negative experience = 0, positive experience = 1) were entered in the first step and their interaction term in the second step. While the main effect of the manipulation was significant,  $\Delta F(2, 81) = 3.72, p = .035, R^2 = .08, \beta = .23$ , there was no significant main effect of occupational strategy,  $\Delta F(2, 81) = 3.72, p = .146, R^2 = .08, \beta = -.16$ .

Additionally, there was no significant Occupational Strategy X Manipulation interaction,  $\Delta F(3, 80) = 1.40, p = .241, R^2 = .10, \beta = .17$ . The results are included in Table 12. Taken together, the analyses do not find support for Hypothesis 11.

*Table 12. Hierarchical Multiple Regression Analyses Predicting Implicit Criminal-Self Association Strength from Parole Officer-Parolee condition Manipulation and Occupational Strategy*

	<i>Model 1</i>	<i>Model 2</i>
Manipulation	.23* (.12)	.23* (.12)
Occupational Strategy	-.16 (.12)	-.27 (.15)
Manipulation X Occupational strategy		.17 (.15)
$R^2$	.08	.10 (n.s.)
Adjusted $R^2$	.06	.07
No. Observations	84	

\*\*\* $p < .001$ , \*\*  $p < .01$ , \* $p < .05$

To test Hypothesis 12, another hierarchical multiple regression was used to test the effect of subjective group identification and the parole officer-parolee experience condition on implicit criminal-self association strength. In the regression mean-centered subjective group identification scores and parole officer-parolee experience condition (coded negative experience = 0, positive experience = 1) were entered in the first step and their interaction term in the second step. Consistent with the above analyses the main effect of the manipulation was significant,  $\Delta F(2,81) = 3.29$ ,  $p = .025$ ,  $R^2 = .08$ ,  $\beta = .24$ , but there was no significant main effect of subjective group identification,  $\Delta F(2,81) = 3.29$ ,  $p = .247$ ,  $R^2 = .08$ ,  $\beta = -.13$ . Regression analyses did not yield a significant Subjective Group Identification X Manipulation interaction,  $\Delta F(3, 80) = .66$ ,  $p = .417$ ,  $R^2 = .08$ ,  $\beta = .12$ . The results are included in Table 13. Hypothesis 12 was not supported.<sup>2</sup>

*Table 13. Hierarchical Multiple Regression Analyses Predicting Implicit Criminal-Self Association Strength from Parole Officer-Parolee condition Manipulation and Subjective Group Identification*

	<i>Model 1</i>	<i>Model 2</i>
Manipulation	.24* (.12)	.24* (.12)
Subjective Group Identification	-.13 (.12)	-.21 (.15)
Manipulation X Subjective group identification		.12 (.15)
$R^2$	.08	.08(n.s.)
Adjusted $R^2$	.05	.05
No. Observations	84	

\*\*\*p<.001, \*\* p <.01, \*p<.05

**Exploratory analyses.** Correlational analyses yielded a significant negative relationship between subjective group identification and the years parole officers served and subjective group identification and age. That is, older parole officers, or parole officers who have been working longer, experienced feelings of disillusionment and detachment from their role as parole officers. It is therefore plausible that years parole and age may then moderate the relation between reminders of past experiences and implicit criminal self-association strength. To explore this, two additional hierarchical multiple regressions were conducted. The first regression was used to explore the effect of years as a parole officer and the parole officer-parolee experience condition on implicit criminal-self association strength. In the regression mean-centered years as a parole officer and parole officer-parolee experience condition (coded negative experience = 0, positive experience = 1) were entered in the first step and their interaction term in the second step. Consistent with the above analyses the main effect of the manipulation was

significant,  $\Delta F(2,81) = 2.68, p = .026, R^2 = .06, \beta = .24$ , but there was no significant main effect of years as a parole officer,  $\Delta F(2,81) = 2.68, p = .358, R^2 = .06, \beta = .14$ . Regression analyses did not yield a significant Years Parole X Manipulation interaction,  $\Delta F(3, 80) = 3.07, p = .083, R^2 = .10, \beta = -.27$ .

The second regression was used to explore the effect of age and the parole officer-parolee experience condition on implicit criminal-self association strength. In the regression mean-centered age and parole officer-parolee experience condition (coded negative experience = 0, positive experience = 1) were entered in the first step and their interaction term in the second step. Consistent with the above analyses the main effect of the manipulation was significant,  $\Delta F(2,81) = 2.70, p = .023, R^2 = .06, \beta = .25$ , but there was no significant main effect of years parole,  $\Delta F(2,81) = 2.70, p = .624, R^2 = .06, \beta = .25$ . Regression analyses did not yield a significant Age X Manipulation interaction,  $\Delta F(3, 80) = 2.34, p = .130, R^2 = .09, \beta = -.25$ .

Finally, it is plausible that how parole officers carry out their job functions and view their occupation may be related to how central the group parole officer is to an individual, which may impact implicit criminal-self association strength. Therefore two additional hierarchical multiple regressions were used to explore the moderating effects of professional orientation on the relation between subjective group identification and implicit criminal-self associations. In the first regression, the mean-centered subjective role scores and the mean-centered subjective group identification scores were entered in the first step, and their interaction term in the second step. The results did not reveal neither a significant main effect of subjective role,  $\Delta F(2, 81) = .69, p = .780, R^2 = .02, \beta = -.03$ , nor a main effect of subjective group identification,  $\Delta F(2,81) = .69, p = .271, R^2 =$

.02,  $\beta = -.12$ . Finally, the Subjective Role X Subjective Group Identification interaction was not significant,  $\Delta F(3, 80) = 1.68, p = .199, R^2 = .04, \beta = .14$ . A second hierarchical multiple regression was used to examine the interactive effect of occupational strategy and subjective group identification on implicit criminal-self association strength. To this end, mean-centered occupational strategy scores and the mean-centered subjective group identification scores were entered in the first step, and their interaction term in the second step. The results did not reveal neither a significant main effect of occupational strategy,  $\Delta F(2, 81) = 2.26, p = .079, R^2 = .05, \beta = -.19$ , nor a main effect of subjective group identification,  $\Delta F(2,81) = 2.26, p = .182, R^2 = .05, \beta = -.15$ . Finally, the Occupational Strategy X Subjective Group Identification interaction was not significant,  $\Delta F(3, 80) = .21, p = .648, R^2 = .05, \beta = .05$ . Taken together these results suggest there is no interaction between professional orientation and subjective group identification.<sup>3</sup>

**Results for participants without criminal history.** Past research has demonstrated the effect of personal experiences in the criminal justice system on implicit criminal-self associations, such that participants who had been arrested, convicted, and/or incarcerated exhibited stronger implicit criminal-self associations in comparison to those who were not (Rivera & Veysey, 2014, 2017; Veysey & Rivera, 2018). To ensure that the above effects were attributed to reminders of past experiences with a parolee, and not related to past personal experiences in the criminal justice system, the main analyses were conducted using only participants who did not have any personal experiences in the criminal justice system. Participants who indicated having been arrested, convicted, and/or incarcerated on the demographics questionnaire were excluded from the following analyses (n=15).

First, the mean of the dependent variable was calculated: implicit criminal-self association ( $M = -.09$ ,  $SD = .16$ ). Zero-order correlations between the demographic variables (age, length of time as a parole officer), subjective group identification, the professional orientation measures (subjective role, occupational strategy), and implicit criminal-self association scores were conducted. Using the same coding scheme as above, a series of ANOVAs were used to analyze the relation between the categorical demographic variables (gender, race/ethnicity, type of caseload, district office location) and implicit criminal-self association scores for the subsample of participants who did not have criminal justice experiences ( $n=69$ ). The ANOVAs and zero-order correlation analyses revealed that no demographic and measured variables were statistically significantly related to implicit-criminal-self association.

Similar to the above analyses, to test the effect of reminders of past experiences on implicit criminal-self associations, IAT scores were subjected to a one-way ANOVA. In support of Hypothesis 3, non-criminal participants who were reminded of a positive experience with their parolees ( $M = -.05$ ,  $SD = .15$ ) exhibited stronger associations between criminal and self when compared to those who were reminded of a negative experience with their parolees ( $M = -.12$ ,  $SD = .16$ ),  $F(1, 67) = 4.11$ ,  $p = .047$ ,  $d = .45$  (medium effect size).

To test Hypothesis 11, two hierarchical multiple regressions were used to explore the moderating effects of professional orientation on the relation between reminder of past experiences and implicit criminal-self associations. The first regression examined the effect of subjective role and the parole officer-parolee experience condition on implicit criminal-self associations. In the regression, mean-centered subjective role scores and



parole officer-parolee experience condition (coded negative experience = 0, positive experience = 1) were entered in the first step and their interaction term in the second step. While the main effect of the manipulation was significant,  $\Delta F(2, 66) = 2.77, p = .032, R^2 = .08, \beta = .26$ , there was no significant main effect of subjective role,  $\Delta F(2, 66) = 2.77, p = .238, R^2 = .08, \beta = -.14$ . Additionally, there was no significant Subjective Role X Manipulation interaction,  $\Delta F(3, 65) = .02, p = .883, R^2 = .08, \beta = .03$ .

The second regression tested the effect of occupational strategy and the parole officer-parolee experience condition on implicit criminal-self association strength. Mean-centered occupational strategy scores and parole officer-parolee experience condition (coded negative experience = 0, positive experience = 1) were entered in the first step and their interaction term in the second step. While the main effect of the manipulation was marginally significant,  $\Delta F(2, 66) = 3.28, p = .058, R^2 = .09, \beta = .23$ , there was no significant main effect of occupational strategy,  $\Delta F(2, 66) = 3.38, p = .114, R^2 = .09, \beta = -.19$ . Additionally, there was no significant Occupational Strategy X Manipulation interaction,  $\Delta F(3, 65) = 1.66, p = .202, R^2 = .12, \beta = .22$ . Taken together these analyses do not find support for Hypothesis 11.

To test Hypothesis 12, another hierarchical multiple regression was used to test the effect of subjective group identification and the parole officer-parolee experience condition on implicit criminal-self association strength. In the regression mean-centered subjective group identification scores and parole officer-parolee experience condition (coded negative experience = 0, positive experience = 1) were entered in the first step and their interaction term in the second step. Consistent with prior analyses the main effect of the manipulation was also significant,  $\Delta F(2, 66) = 2.76, p = .044, R^2 = .08, \beta = .24$ , but

there was no significant main effect of subjective group identification,  $\Delta F(2, 66) = 2.76$ ,  $p = .244$ ,  $R^2 = .08$ ,  $\beta = -.14$ . Regression analyses did not yield a significant Subjective Group Identification X Manipulation interaction,  $\Delta F(3, 65) = .75$ ,  $p = .390$ ,  $R^2 = .09$ ,  $\beta = .14$ . Hypothesis 12 was not supported.<sup>4</sup>

**Post-hoc power analyses.** G\*Power 3.1 (Faul et al., 2009) was used to conduct a *post hoc* power analysis of the main effect of the parole officer-parolee experience reminder. For an ANOVA, fixed effects, omnibus, one-way with a sample size of 84, two groups, effect size set at .250, and alpha at .05, G\*Power yielded power of .62. Using the same parameters (except for sample size), an additional *post hoc* power analysis of the main effect of the parole officer-parolee experience reminder was conducted for the subsample of participants who did not have criminal justice experiences. G\*Power yielded power of .54.

## Discussion

Study 2 tested self-expansion using a sample of parole officers and examined implicit criminal-self associations, one potential consequences of self-expansion with parolees. Study 2 examined the effect of being reminded of past experiences with parolees on the self-concept of parole officers. Additionally, Study 2 explored the moderating effects of parole officer's subjective professional identity, namely, professional orientation and group identification on the relation between reminders of past experiences and implicit criminal-self associations. Although Study 2 found support for Hypothesis 3, neither of the measures of parole officer subjective professional identity had a significant main effect on implicit criminal-self associations nor did they moderate

the relation between past experiences and implicit criminal-self associations (Hypotheses 11 and 12).

Past self-expansion research has focused on personal relationships or on occupations as a whole. Study 2 extends the existing research and focuses on self-expansion (1) in an employment-based, hierarchical relationship and (2) with members of a highly stigmatized group (i.e., parolees). Findings show that parole officers as a whole do not exhibit an association with the group criminal, suggesting that parole officers generally distance themselves from parolees. However, parole officers who are reminded of a positive experience exhibited stronger associations with the group criminal, that is are more neutral in their associations, in comparison to parole officers who are reminded of a negative experience. In other words, parole officers who are reminded of a positive experience with a parolee exhibit a decrease in the cognitive distance between their self-concept and the group criminal in comparison to parole officers who are reminded of a negative experience. In contrast, officers who were reminded of their negative experiences were likely to implicitly minimize the connection between themselves and parolees.

These effects were not moderated by the professional characteristics of professional orientation and group identification (Hypotheses 11 and 12). In addition, parole officers' subjective role and occupational strategies, elements of professional orientation did not have either a main effect on implicit criminal-self association strength, or a moderating effect on the relation between reminders of past experiences and implicit criminal-self association strength. These findings suggest that regardless of professional

characteristics, salient memories are those which are used in guiding implicit cognitions (Nisbett & Ross, 1980).

Moreover, the findings were consistent across the full sample of participants and within the subsample of participants who did not have any personal criminal justice experiences. This suggests that regardless of parole officers' experiences in the criminal justice system, salient memories of experiences with parolees are those which guide implicit cognitions. However, this study cannot answer the question of the effects of salient memories of one's personal experiences in the criminal justice system on parole officer cognitions. The above effects are only based on the experiences of parole officers' with others who have had criminal experiences.

## **Chapter 6: Indirect Experiences with Offenders Predict Self-Expansion (Study 3)**

Study 3 focuses on the cognitive consequences of indirect experiences with offenders on criminal justice students. Study 3 extends Studies 1 and 2, and tests self-expansion theory among criminal justice students, a group that is not expected to have direct personal or professional relationships with offenders, but rather has indirect experiences with them through their coursework. The knowledge, information, and experiences criminal justice students acquire related to offenders, crime, and criminality, is likely to come from others who themselves may also be non-criminal, such as instructors, researchers, and practitioners. This begs the question, is knowledge transfer through educational experiences sufficient to influence the cognitions of criminal justice students? Specifically, does education impact how criminal justice students view themselves with respect to offenders?

Some research suggests that self-expansion can occur in non-relational contexts as a result of novel and interesting experiences (see below for a review of non-relational self-expansion). Consistent with that body of research, it is theoretically possible that, during their coursework, criminal justice students engage in novel and interesting experiences, which may allow self-expansion with offenders. Study 3 also extends Studies 1 and 2 and tests an additional consequence of self-expansion; specifically, the extent to which criminal justice students associate with well-known members of the group criminal (i.e., celebrities who have been convicted of a crime) compared to non-criminal justice students. The goals of Study 3 are to test self-expansion theory as a potential cognitive mechanism that facilitates implicit associations between the self-

concept of criminal justice students 1) and the group criminal and 2) well-known offenders.

This chapter begins by providing an overview of the current research centered around the impact classroom experiences may have on the cognitions of criminal justice students. Following this is a review of the application of non-relational self-expansion; then more specifically an application of non-relational self-expansion in criminal justice students. The methodology and results of Study 3 are then presented, and the chapter concludes with a discussion of the findings.

### **Cognitions of Criminal Justice Students**

During their educational endeavors, students fulfilling a major in criminal justice acquire a wealth of knowledge about offenders, their thoughts, behaviors, and attitudes, as well as the legal and social consequences they face. They may even engage in educational experiences in which they come in contact with the criminal justice system, practitioners, and offenders (e.g., inside-out programs, tours of criminal justice facilities, internships at courthouses, guest speakers). In contrast, non-criminal justice students are not likely to be exposed to this knowledge. It stands to reason that the criminal-related cognitions of criminal justice students and non-criminal justice students should differ.

Several studies have examined explicit cognitions, specifically attitudes and perceptions, of criminal justice students. This research can be categorized into two types based on the focus of the studies. One body of research is centered around changes in the cognitions of criminal justice students before and after criminal justice courses (Bohm & Vogel, 1991; Gainey & Payne, 2003; Lane, 1997). These studies utilize pre- and post-test designs to examine attitudinal changes before and after taking various types of criminal

justice courses. Bohm and Vogel (1991) and Lane (1997) find that students' attitudes and perceptions towards punishment changed after completing a criminal justice course.

While Bohm and Vogel (1991) found that after taking a criminal justice course students expressed less punitive attitudes towards offenders in general, Lane (1997) found that students expressed less punitive attitudes towards non-violent offenders only. She did not find any change in punitive attitudes towards violent offenders (Lane, 1997). Gainey and Payne (2003) found that upper level criminal justice students' attitudes and perceptions of punishment changed after watching a single presentation. Specifically, following the presentation, students perceived electronic monitoring as a more punitive measure of punishment in comparison to their perceptions of electronic monitoring prior to the presentation. These studies demonstrate the impact of criminal justice course content on the explicit cognitions of students. Although these studies only measured changes in explicit attitudes and perceptions, it may reflect changes in implicit cognitions.

The second category of research compares the cognitions of criminal justice majors to non-criminal justice majors. This body of research focuses on differences in attitudes towards crime and the criminal justice system (Selke, 1980; Tsoudis, 2000; Wolfer & Friedrichs, 2001), gun control (Payne & Riedel, 2000), inmate privileges (Hensley, Miller, Tewksbury, & Koscheski, 2003), knowledge of crime (Lambert & Clarke, 2004), and attitudes towards punishment (Courtright, Mackey, & Packard, 2005; Falco & Martin, 2012; Farnworth, Longmire, & West, 1998; Mackey & Courtright, 2000). Although some studies did not find differences in attitudes or perceptions between criminal justice majors and non-criminal justice majors (Hensley et al., 2003; Lambert & Clarke, 2004; Wolfer & Freidrichs, 2001), several other studies found differences in

attitudes and perceptions between majors (Courtright et al., 2005; Falco & Martin, 2008; Farnworth et al., 1998; Mackey & Courtright, 2000; Payne & Riedel, 2000; Selke, 1980; Tsoudis, 2000). However, the findings of these studies are also inconsistent. Some studies find that criminal justice students hold more punitive attitudes and perceptions towards offenders (Courtright et al., 2005; Farnworth et al., 1998; Mackey & Courtright, 2000; Payne & Riedel, 2000), while other studies find that criminal justice students hold less punitive attitudes and perceptions towards offenders (Falco & Martin, 2008; Tsoudis, 2000; Selke, 1980) in comparison to non-criminal justice students. Therefore it is unclear exactly how criminal justice education affects the explicit cognitions of students. Despite these mixed findings, these studies suggest that the cognitions of criminal justice students may differ from those of non-criminal justice students, and these differences are often attributed to the educational process (Farnworth et al., 1998; Tsoudis, 2000). That is, criminal justice students' attitudes towards crime and offenders change, potentially due to the exposure they to topics related crime, criminality, and the criminal justice system.

Based upon this body of research, Study 3 tests if the cognitions of criminal justice majors differ from those of non-criminal justice majors. However, Study 3 differs from the above research in several important ways. The above research suggests that there may be differences in the *explicit* cognitions of criminal justice students, but has not examined differences with respect to *implicit* cognitions. Moreover, the above studies focus on cognitions related to perceptions and attitudes of students. This study examines differences in cognitions related to the self-concept of students. Therefore, Study 3 extends the above research and tests if there are differences in the implicit cognitions related to the self-concept of criminal justice students. Specifically, do criminal justice



students differ in how they view themselves with respect to a) the group criminal and b) well-known criminals? While the importance of the educational process is acknowledged, Study 3 tests self-expansion as a potential mechanism by which the implicit cognitions of criminal justice students are impacted. To this end, Study 3 examines differences in the potential cognitive consequences of self-expansion between criminal justice students and non-criminal justice students.

### **Non-Relational Self-Expansion**

While most self-expansion research has focused on self-expansion in personal relationships, some self-expansion research suggests that people can self-expand in non-relational contexts as well (Mattingly & Lewandowski, 2014a, 2013). The most basic assertion of self-expansion theory is that people are motivated to self-expand to enhance their personal growth, progress, and self-efficacy (Aron & Aron, 1996). In relationships, close, frequent, and positive experiences provide people with opportunities to acquire new physical and social resources, develop new perspectives, and adopt new characteristics that also impact their self-concept (Aron & Aron, 1986; Aron et al., 1997).

Similar to relational self-expansion, non-relational self-expansion also arises from people's motivation to expand their sense of self for their personal growth, progress, and self-efficacy (Mattingly & Lewandowski, 2014a, 2013). Non-relational self-expansion occurs when people engage in novel and interesting experiences. Experiences such as undergoing financial changes, learning a new skill, or traveling provide people with new perspectives, resources, and characteristics which they can incorporate into their self-concept. This results in an expanded sense of self, and has been found to help people

meet their personal goals (Hoffner, Lee, & Park, 2016; Mattingly, & Lewandoski, 2014a, 2013; Xu, Floyd, Westmaas, & Aron, 2010; Xu et al., 2016).

Unlike relational self-expansion research, non-relational self-expansion is often measured by examining self-descriptions. The number of self-descriptors people associate with is a measure of self-concept size, an indicator of self-expansion. In other words, the extent to which people include self-descriptions in their self-concept reflects the extent to which people exhibit self-expansion. Larger numbers of self-descriptions indicate relatively greater self-concept size, or self-expansion (Mattingly & Lewandowski, 2014a, 2014b, 2013; Xu et al., 2010; Xu et al., 2016).

In a series of studies, Mattingly and Lewandowski (2014a, 2014b, 2013) measured self-concept size to measure self-expansion in non-relational contexts. In one study, participants were asked to indicate how many life events they experienced six months prior to completing the study. Participants then used a list of 115 adjectives/traits to select self-descriptions. Mattingly and Lewandowski (2014a) found a positive correlation between the number of life events people experienced and self-descriptions. In other words, participants who underwent more life events exhibited a more expanded self-concept.

Not only were life events found to contribute to self-expansion but also novel and interesting physical and cognitive experiences (Mattingly & Lewandowski, 2013). In one study participants were first assigned to complete either a novel and interesting experience task (i.e., carry objects using chopsticks) or not (i.e., carry objects without chopsticks), then complete a five-item self-expansion questionnaire. The self-expansion questionnaire measured the extent to which participants exhibited an expanded sense of

self (i.e., new abilities, perspectives, skills, knowledge) using a Likert-type scale (1 = not very much, 7 = very much). Participants who completed the novel and interesting experience task exhibited greater self-expansion in comparison to those who did not (Mattingly & Lewandowski, 2013). In a second study, using a different sample, participants were first assigned to either read a list of novel and interesting facts or read a list of dull and uninteresting facts, followed by a five-item self-expansion questionnaire. Similar to the first study, participants who read the list of interesting and novel facts exhibited greater self-expansion in comparison to those who did not (Mattingly & Lewandowski, 2013). Their findings suggest that novel and interesting experiences, regardless of their nature being physical or cognitive, can provide people with opportunities to self-expand.

Even in the absence of actually engaging in a novel and interesting experiences, manipulating experiences was found to be related to self-expansion. In Mattingly and Lewandowski's (2014a) study, participants were instructed to pull bricks towards them (versus point) that were labeled with interesting and novel (versus non-novel and uninteresting) activities that participants had not previously engaged in. Self-expansion was then measured by asking participants to select self-descriptions using a list of 115 adjectives/traits. Among the participants who selected novel and interesting activities, participants who pulled the bricks towards them exhibited greater self-expansion in comparison to participants who pointed to the bricks. Among the participants who were instructed to pull the bricks, participants who selected bricks labeled with novel and interesting activities exhibited greater self-expansion in comparison to those who selected bricks labeled with non-novel and uninteresting tasks. This reflects that even in the

absence of engaging in actual experiences, metaphorically including novel and interesting experiences into the self-concept can affect self-expansion (Mattingly and Lewandowski, 2014a).

Relatedly, Shedlosky-Shoemaker and colleagues (2014) also found that people can self-expand in the absence of engaging in real world experiences with others. Using the Inclusion of Other in the Self (IOS) scale (see Chapter 2), participants were asked to indicate the extent to which they self-expanded with a favorite fictional television character and a non-favorite fictional character. Participants exhibited greater self-expansion with their favorite character in comparison to their non-favorite character (Shedlosky-Shoemaker, Costabile, & Arkin, 2014). This suggests that in the absence of real-world experiences, the narratives of others in the media can provide the necessary conditions for self-expansion to occur. This may occur because exposure to characters through the media provide people with novel and interesting virtual experiences from which people can acquire new perspectives, resources, and characteristics, resulting in self-expansion. Although this study does not measure self-expansion with non-fictional others in the media, it suggests that self-expansion can also extend to such individuals if people are aware of their narratives and their narratives provide the necessary conditions for people to engage in novel and interesting virtual experiences.

Taken together these studies demonstrate that in the absence of relationships, novel and interesting experiences can provide the necessary contexts for people to expand their self-concept. These experiences can occur cognitively, physically, or virtually. Insofar as such experiences provide people with opportunities to acquire new perspectives, resources, and characteristics, self-expansion is likely to occur.

### **Self-Expansion in Criminal Justice Students**

Study 3 differs from and builds upon the above research in several important ways. First, Study 3 adopts a different theoretical approach (reviewed in Chapter 2) guided by the perspectives of implicit social cognition theory and uses implicit measures. Prior investigations of non-relational self-expansion have used explicit measures to examine the effects of experiences on the self-concept. Specifically, past research measured self-expansion by asking participants to self-report the extent to which they acquired new perspectives or resources (Mattingly & Lewandowski 2013), self-descriptions (Mattingly & Lewandowski, 2014a, 2014b), and incorporated another person in their self-concept (Shedlosky- Shoemaker et al., 2014). The extent to which people exhibited these consequences served as indicators of self-expansion. In contrast, to measure self-expansion, like Studies 1 and 2, Study 3 utilizes implicit measures, specifically the IAT as a measure of self-expansion.

Study 3 extends past research on non-relational self-expansion, and tests the effects of indirect experiences with a stigmatized group, that of criminal. Although Shedlosky-Shoemaker and colleague's (2014) study examined self-expansion with fictional characters, it was unclear whether characters carried a stigma. Similar to Studies 1 and 2, Study 3 tests self-expansion with the group criminal, a group that is clearly stigmatized. In addition, Study 3 extends self-expansion research and Studies 1 and 2 and tests self-expansion with well-known offenders, individuals who bear the stigma of being a part of the group criminal.

An additional consequence of self-expansion with offenders may also be associations between the self-concept and well-known offenders. Using the same logic

that underpins self-expansion with fictional television characters (Shedlosky-Shoemaker et al., 2014), people may also have the ability to self-expand with non-fictional individuals portrayed in the media, if their narratives meet the pre-requisites of self-expansion. Specifically, such narratives may provide novel and interesting experiences from which people can acquire new resources, perspectives, and characteristics. Study 3 tests self-expansion as the mechanism by which criminal justice students can associate self with well-known offenders. Study 3 examines two additional potential consequences of self-expansion, 1) the unconscious association between the self and well-known members of the group criminal, or *implicit famous criminal-self associations* and 2) the conscious association between the self and well-known members of the group criminal, or *explicit famous criminal-self associations*.

Throughout their coursework, criminal justice students engage in novel and interesting criminal-related experiences indirectly. Cognitively, they may acquire new and interesting knowledge related to being an offender, crime, criminality, and the social and legal consequences of offending. Physically, they may even engage in experiences where they directly interact with offenders (e.g., inside-out programs, visiting correctional institutions, guest speakers). These opportunities may provide students with new perspectives, resources, and characteristics which in turn may result in self-expansion. In contrast, non-criminal justice students who do not engage in such experiences are not expected to self-expand. Study 3 tests the following hypothesis: criminal justice students will exhibit stronger implicit criminal-self associations in comparison to non-criminal justice students (Hypothesis 1).

Due to their academic interests, criminal justice students are theoretically more attuned to criminal justice related information in the media (i.e., they may be more aware of the narratives of well-known, celebrity offenders) in comparison to non-criminal justice students. The narratives of well-known offenders may provide criminal justice students with new perspectives and resources that facilitate self-expansion. In addition, self-expansion theory postulates that when self-expansion occurs people have the ability to associate with individuals with whom they interact, the groups to which the individual belongs, and the stereotypes related to that group, even if they are negatively perceived (Page-Gould et al., 2010a). This may also extend to other members of the group. Similar to the way in which people may associate with the stereotypes of a close other's group, they may also be able to associate with other people who belong to a close other's group. It is plausible that criminal justice students, therefore, will self-expand with well-known offenders in the media. Study 3 tests the following hypothesis: criminal justice students will exhibit stronger implicit famous criminal-self associations in comparison to non-criminal justice students (Hypothesis 13).

Due to the negatively perceived status of the group criminal and well-known members of the group, it is expected that self-expansion will not affect explicit associations. Moreover, criminal justice students may be unaware of how their academic experiences affect their cognitions. In line with this, Study 3 will test the following hypotheses: it is predicted that explicit criminal-self associations will not differ between criminal justice students and non-criminal justice students (Hypothesis 2), explicit famous criminal-self associations will not differ between criminal justice students and non-criminal justice students (Hypothesis 14), implicit and explicit criminal-self

associations will be weakly or not correlated among criminal justice students (Hypothesis 5), and implicit and explicit famous criminal-self associations will be weakly or not correlated among criminal justice students (Hypothesis 15). With regard to non-criminal justice students implicit and explicit criminal-self associations will be weakly or not correlated (Hypothesis 16), and implicit and explicit famous criminal-self associations will be weakly or not correlated (Hypothesis 17), because implicit and explicit cognitions are derived from distinct cognitive processes (Greenwald & Banaji, 1995).

### **Study Overview**

Study 3 extends Studies 1 and 2 and tests if criminal justice students, a group that has indirect experiences with offenders, can exhibit implicit associations with the group criminal as well as implicit associations with well-known offenders. Implicit criminal-self association strength is measured using the same IAT used in Studies 1 and 2. Study 3 also measures explicit criminal-self associations using the same self-report measure used in Study 1. To measure associations with well-known offenders, a new double-category IAT (versus a Single-Category IAT) and related self-report measure were developed. A double-category IAT was more appropriate to measure associations with well-known offenders because the category, well-known non-offenders, represents a clear contrasting category to the category well-known offenders. First a pretest was conducted to establish the content validity of the stimuli used in the new double-category IAT using an undergraduate student sample from an urban university. Tables 14 and 15 outline the general and study specific research questions and hypotheses tested in Study 3.



Table 14. General research questions and related hypotheses tested in Study 3.

<b>Research Question #1: Do those who have direct relationships or indirect experiences with offenders exhibit implicit or explicit criminal-self associations?</b>
H <sub>1</sub> : Criminal justice students are predicted to exhibit stronger <i>implicit</i> criminal-self associations in comparison to non-criminal justice students.
H <sub>2</sub> : It is predicted that <i>explicit</i> criminal-self associations will not differ between criminal justice students and non-criminal justice students.
<b>Research Question #3: What is the relation between explicit and implicit measures of criminal-self associations?</b>
H <sub>5</sub> : It is predicted that implicit and explicit criminal-self associations will be weakly or not correlated for criminal justice students.

Table 15. Study specific research questions and related hypotheses tested in Study 3.

<b>Research Question #7: Do criminal justice students exhibit implicit or explicit famous criminal-self associations?</b>
H <sub>13</sub> : Criminal justice students are predicted to exhibit stronger <i>implicit</i> famous criminal-self associations in comparison to non-criminal justice students.
H <sub>14</sub> : It is predicted that <i>explicit</i> famous criminal-self associations will not differ between criminal justice students and non-criminal justice students.
<b>Research Question #8: What is the relation between explicit and implicit measures of famous criminal-self associations for criminal justice students?</b>
H <sub>15</sub> : It is predicted that implicit and explicit famous criminal-self associations will be weakly or not correlated for criminal justice students.
<b>Research Question #9: What is the relation between explicit and implicit measures for non-criminal justice students?</b>
H <sub>16</sub> : It is predicted that implicit and explicit criminal-self associations will be weakly or not correlated for non-criminal justice students.
H <sub>17</sub> : It is predicted that implicit and explicit famous criminal-self associations will be weakly or not correlated for non-criminal justice students.

## Pretest

Stimuli were pretested for inclusion in the new double category IAT. Pretesting stimuli to be used in the IAT is important because it reduces potential response bias,

which can affect the magnitude, direction, and validity of the IAT. Pretesting determines content validity, and is a necessary factor in establishing the predictive validity of the IAT (Bluemke & Frieze, 2006). In addition, pretesting ensures that the stimuli used in the IAT are representative of the category which they are intended to represent (Teige-Mocigemba et al., 2010). Therefore, the purpose of the pretest was to select a set of criminal and non-criminal celebrity faces (i.e., musicians, athletes, reality television stars) as stimuli for the implicit and explicit associations with well-known offenders measures.

A well-known offender was defined as any celebrity portrayed in the media who was previously convicted of a crime. Celebrities were selected to represent the criminal and non-criminal categories because they were expected to be people that participants would be highly familiar with. Forty-seven potential stimuli were tested in terms of their offending behavior to ensure they reflected the categories they were intended to represent. In other words, one goal of the pretest was to ensure that an adequate number of students properly identified stimuli as offenders or non-offenders. Additionally, to control for bias, stimuli were evaluated on a feeling thermometer to ensure neutral attitudes. Attitudes towards stimuli have the potential to skew the direction of IAT results and as such stimuli must be similar in terms of valence (Bluemke & Frieze, 2006). For example, if stimuli which represent the group criminal hold negative attitudes, this may increase the effect of the IAT because the group criminal and the stimuli would both represent negative attitudes, thus facilitating response times. Alternatively, if stimuli which represent the group criminal hold positive attitudes, this may decrease the effect of the IAT due to incongruent attitudes between the stimuli and the category they are intended to represent, which is expected to decrease response times.

## **Method.**

***Participants.*** Seventy-two undergraduate students (52 females, 20 males) from an undergraduate psychology course at an urban public university participated in exchange for extra credit. Twenty-five percent identified as Hispanic, 21% were Asian or Pacific Islander, 19% were African-American or Black, non-Hispanic, 17% were White, non-Hispanic, 11% were Multiracial, 4% were American Indian, and 3% did not identify with any of the race/ethnicity options.

***Stimuli selection.*** Forty-seven male celebrity faces (26 well-known criminals, 21 well-known non-criminals) were selected using a Google search. Only male stimuli were selected because gendered stimuli might impact IAT results (Bluemke & Fries, 2006). In the context of criminal, because criminal is a male stereotypic trait (Brennan & Vandenberg, 2009), it may be possible that female stimuli who represent the group criminal may not be accurately categorized as such. Therefore, to ensure IAT results are not impacted by cultural stereotypes, only male stimuli were selected. Forty-five percent of the celebrities were Black or African American, 38% were White, 11% were multiracial, 2% were Hispanic, and 4% were another ethnicity (see Table 16). In line with research demonstrating that context can influence judgements, only head shots were presented (Mitchell, Nosek, & Banaji, 2003).

*Table 16. Cross-tabulation of Racial-Ethnic Identification of Stimuli in Pretest by Criminal Behavior*

Racial-Ethnic Identification of Stimuli	Criminal Behavior		
	Criminal <i>n</i> (%)	Non-criminal <i>n</i> (%)	Total <i>n</i> (%)
Black/African American	12 (25.53)	9 (19.15)	21 (44.68)
White	9 (19.15)	9 (19.15)	18 (38.30)
Multiracial	2 (4.26)	3 (6.38)	5 (10.64)
Hispanic	1 (2.13)	0 (0)	1 (2.13)
Other	2 (4.26)	0 (0)	2 (4.26)
Total	26 (55.32)	21 (44.68)	47 (100)

### ***Measures.***

*Criminal behavior.* To determine if a sufficient number of people were aware of each celebrity's criminal behavior, participants rated the criminal behavior of each face on a three-point scale. Participants were asked to select from the following options: 0 (*I definitely know this person is NOT a criminal*); 1 (*I think this person MAY be a criminal*); or 2 (*I definitely know this person IS a criminal*).

*Valence.* Feelings towards stimuli can impact IAT results, in that stimuli which represent attitudes that are congruent with the categories they are intended to represent, may increase reaction times and stimuli which represent incongruent attitudes may decrease reaction times (Bluemke & Fries, 2006). As such, stimuli were tested for valence. Participants rated their feelings towards each celebrity using a feeling thermometer, a measure used to evaluate attitudes. Higher temperatures (51-99) reflect warm or favorable attitudes and lower temperatures (0-49) reflect cold or unfavorable attitudes, with 50 indicating neutral feelings.

***Procedure.*** Participants completed one of the two measures listed above during the last 15 minutes of class time. Half of the participants rated all of the faces for criminal

behavior and half of the participants rated all of the faces for valence in random order. If a participant did not recognize the celebrity they did not provide a response for that celebrity and proceeded to the next celebrity. Participants then completed a basic demographics questionnaire in which they were asked to indicate their gender and ethnicity.

### **Results.**

The goal of the pre-test was to select a set of well-known criminal and non-criminal faces which were as similar as possible to each other in terms of their behavior (criminal or non-criminal), valence, race, and familiarity.

First the criminal behavior variable was recoded into a dichotomous variable such that responses of “is NOT a criminal” were recoded as “0”, and responses of “MAY be a criminal” and “IS a criminal” were recoded as “1”. A response of “MAY be a criminal” indicated that more likely than not, participants believed the individual was an offender. An expression that an individual could possibly be an offender may reflect knowledge towards the individual’s offending behavior.

A series of chi-square tests were conducted to select individuals based on whether respondents properly identified the celebrities as criminals or non-criminals and how well people knew the celebrities. Twenty-two celebrities were properly identified as criminal or non-criminal by over 50% of participants and were known by over 50% of participants. Next, a series of one-sample t-tests with a test value of 50, the neutral point on the feeling thermometer, were used to investigate attitudes towards the reduced set of celebrities. Three criminal celebrities (*T.I.* ( $M_{valence} = 63.10, SD = 23.09$ ), *50 Cent* ( $M_{valence} = 55.68, SD = 27.38$ ), and *Chris Brown* ( $M_{valence} = 46.86, SD = 30.81$ )), and three

non-criminal counterparts (*Drake* ( $M_{valence} = 62.74, SD = 26.74$ ), *Reggie Bush* ( $M_{valence} = 55.38, SD = 21.57$ ) and *Tiger Wood* ( $M_{valence} = 43.23, SD = 23.28$ )) who were similar in terms of valence, race, and criminal behavior were selected (see Table 17). However, attitudes towards T.I.  $t(27) = 3.00, p = .006$  and Drake  $t(33) = 2.77, p = .009$  were statistically significantly different from the neutral point on the feeling thermometer. The recommended number of stimuli in an IAT is two stimuli per category. Moreover, IAT effect size increases (albeit slightly) when the number of stimuli is more than two (Nosek et al., 2005). Therefore, T.I. was included in to serve as a stimulus for the criminal category and Drake was included as stimulus for the non-criminal category. Moreover, their mean valence scores were the most similar to each other.

*Table 17. Mean ratings of well-known criminal and non-criminal IAT stimuli on criminal behavior and valence.*

IAT Stimuli	Criminal behavior		Valence	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Well-known criminals				
T.I.	.69	.47	63.11	23.82
50 Cent	.70	.46	55.68	27.38
Chris Brown	.76	.44	46.86	30.81
Well-known non-criminals				
Drake	.18	.39	62.74	26.74
Reggie Bush	.19	.40	55.36	21.57
Tiger Woods	.28	.45	43.23	23.28

*Note:* Criminal behavior was coded 0 to 1, 0 being not a criminal. The valence scale ranged from 0-99, 0 being cold or unfavorable and 99 being warm or favorable.

### Study 3

#### Method.

***Participants and design.*** Ninety-nine participants from undergraduate criminal justice and psychology classes participated in the study in exchange for course credit.

Four participants were excluded from analyses for fulfilling minors in criminal justice

and three participants were excluded for reporting having a personal criminal justice experience (i.e., arrest, conviction, and/or incarceration). Participants who are minors in criminal justice are exposed to a substantial amount of criminal justice related information which may impact cognitions related to the group criminal. Moreover, having a personal criminal justice experience has been found to impact implicit criminal-self associations (Rivera & Veysey, 2014; Veysey & Rivera, 2017). The final sample consisted of 92 students (52 females, 40 males,  $M_{\text{age}} = 20.34$ ,  $SD = 3.07$ , age range: 18-39). Twenty-six percent of participants identified as White, 24% were Hispanic, 18% were Asian or Pacific Islander, 14% were African-American or Black, 3% were multi-racial, 2% were American Indian and 13% were another ethnicity not listed. Forty-nine percent of students were majoring in criminal justice (5 freshmen, 5 sophomores, 18 juniors, and 17 seniors) and 51% of students were fulfilling other majors (27 freshmen, 8 sophomores, 7 juniors, and 5 seniors). The study employed a one factor two-level (Major: criminal justice vs. non-criminal justice) between-participants design.

### ***Measures.***

*Implicit criminal-self associations.* See Chapter 3.

*Implicit famous criminal-self associations (IFC).* A double category IAT (Greenwald et al., 1998) was administered to measure implicit associations between the self and well-known offenders using reaction times. The implicit famous criminal-self associations IAT measured the relative strength of two target groups (*self* vs. *others*) with two opposing groups (*criminal* vs. *non-criminal*). In the implicit famous criminal-self associations IAT, semantic stimuli that represent self and other and pictorial stimuli that represent well-known criminals and non-criminals appeared one after the other in the

center of the screen. The self and other words were the same words used in the implicit criminal-self associations IAT. The well-known criminal (T.I., 50 Cent, and Chris Brown) and non-criminal (Drake, Reggie Bush, and Tiger Woods) stimuli were those pre-tested above.

Stimuli appeared randomly one after the other centered on the computer screen while category labels were appropriately positioned on the top left (e.g., “self,” “criminal”) and top right (e.g., “other,” “non-criminal”) sides of the screen. Participants’ main task was to categorize the four types of stimuli using two designated response keys on the keyboard. For half of the task, participants used the “A” key to classify “self” and “criminal” stimuli and the “K” key to classify “other” and “non-criminal” stimuli. The second half of the task was reversed; participants used the “A” key to classify “other” and “criminal” stimuli and “K” to classify “self” and “non-criminal” stimuli. These tasks were counterbalanced between participants. For each task, participants first read the instructions then completed 20 practice trials, followed by 50 critical trials. For each trial, the target remained on the screen until participants responded. If the participant responded correctly, a new target appeared. If the participant responded incorrectly, the word “ERROR” appeared on the screen in place of the target and remained until the participant pressed the correct key.

The implicit famous criminal-self associations IAT was scored in accordance with the procedures outlined by Greenwald, Nosek, and Banaji (2003). The score is the difference in the average response time between the two critical category blocks (self and criminal trials minus the self and non-criminals trials) divided by the pooled standard deviation. Relatively higher IAT scores indicate faster reaction times when the self and



criminal related stimuli are paired together than when self and non-criminal stimuli are paired together. Thus, a higher IAT score indicates stronger implicit associations between members of the group criminal and self ( $\alpha = .78$ ).

*Explicit criminal-self associations.* See Study 1 ( $\alpha = .88$ ).

*Explicit famous criminal-self associations.* Participants were asked to self-report the extent to which they associated themselves with the six well-known criminals and non-criminals in the implicit famous criminal-self associations IAT on a 7-point scale from (0) *I do not at all associate with this individual* to (6) *I extremely associate with this individual*. All pictures were randomly presented. Explicit famous criminal-self associations are calculated using a difference score between ratings for well-known criminals minus ratings for well-known non-criminals. Higher scores indicate stronger explicit associations with well-known members of the group criminal and self ( $\alpha = .81$ ).

*Demographics.* Participants were asked to identify their gender, age, race/ethnicity, employment status, income, year in college, major and minor degrees being fulfilled, and their personal criminal justice experience.

***Procedure.*** A research assistant informed participants that the study's purpose was to examine "people's identity and experiences." All participants completed the study on a computer. Participants first completed the implicit criminal-self associations IAT and the implicit famous criminal-self associations IAT, followed by the explicit criminal-self associations and explicit famous criminal-self association measures and the demographics questionnaire. Finally, all participants were debriefed, which included an explanation of the study's purpose, a reminder that their information was being kept confidential, contact information of the researchers, and a phone number for the on-

campus counseling center. Participants had the opportunity to withdraw from the study and have their recorded data deleted at the time of debriefing.

## Results

First, descriptive statistics for all dependent measures were calculated: implicit criminal-self associations ( $M = -.13$ ,  $SD = .12$ ), implicit famous criminal-self associations ( $M = -.26$ ,  $SD = .38$ ), explicit criminal-self associations ( $M = 1.34$ ,  $SD = .69$ ), and explicit famous criminal-self associations ( $M = -.42$ ,  $SD = 1.42$ ). Zero-order correlations between the demographic variables (age, year in college, income) and the implicit and explicit criminal-self and famous criminal-self association scores were conducted for the entire sample. The zero-order correlation analyses revealed that age, year in college, and income were not statistically significantly related to implicit and explicit criminal-self and implicit and explicit famous criminal-self association scores for the entire sample and by major. The results are included in Table 18 for the entire sample and Table 19 for each major. The relation between the categorical demographic variables (gender, employment status, parental level of education, race/ethnicity) and implicit and explicit criminal-self and implicit and explicit famous criminal-self association scores across the entire sample were analyzed using a series of ANOVAs. Gender was coded (1 = *male*; 0 = *female*); employment status was coded (1 = *employed*; 0 = *not employed*); parental level of education was coded (1 = *high school*; 2 = *some college*; 3 = *college graduate*); race/ethnicity was coded (1 = *Black/African American and Hispanic*; 0 = *all others*). This analysis revealed that gender was significantly related to explicit criminal-self associations,  $F(1, 90) = 4.90$ ,  $p = .029$ , as was race/ethnicity,  $F(1, 90) = 5.14$ ,  $p = .026$ . Men ( $M = 1.51$ ,  $SD = .89$ ), exhibited significantly stronger explicit criminal-self

associations in comparison to women ( $M = 1.20$ ,  $SD = .45$ ). Non-Black/ African American and non- Hispanic participants ( $M = 1.46$ ,  $SD = .84$ ) exhibited significantly stronger explicit criminal-self associations in comparison to Black/African American and Hispanic participants ( $M = 1.13$ ,  $SD = .23$ ). Thus gender and race/ethnicity were controlled for in Hypothesis 2 analyses.

*Table 18. Zero-Order Correlations between Implicit and Explicit Criminal-Self Associations, Implicit and Explicit Famous Criminal-Self Associations, and demographic factors (N=92)*

	1	2	3	4	5	6	7
1. Implicit Criminal-Self Association	-						
2. Implicit Famous Criminal-Self Association	-.15	-					
3. Explicit Criminal-Self Association	-.02	.03	-				
4. Explicit Famous Criminal-Self Association	-.08	.10	.02	-			
5. Age	-.12	-.05	-.12	-.14	-		
6. Year in College	.03	-.15	-.16	-.18	.59**	-	
7. Income	-.01	.07	.01	.02	-.08	.03	-
Overall $M$	-.13	-.26	-.42	1.34	-.42	20.34	-
$SD$	.12	.38	1.42	.69	1.42	3.07	-

\*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$

*Table 19. Zero-Order Correlations between Implicit and Explicit Criminal-Self Associations, Implicit and Explicit Famous Criminal-Self Associations, and demographic factors*

	1	2	3	4	5	6	7	M	SD
1. Implicit Criminal-Self Association	-	-.01	-.04	-.06	-.12	.09	-.06	-.12	.12
2. Implicit Famous Criminal-Self Association	-.26	-	.07	.17	.02	.09	.28	-.35	.40
3. Explicit Criminal-Self Association	.02	-.05	-	.15	-.06	.06	-.02	1.27	.68
4. Explicit Famous Criminal-Self Association	-.08	-.09	-.19	-	-.03	-.16	.03	-.65	1.62
5. Age	-.15	-.03	-.23	-.22	-	.53**	-.09	20.96	3.16
6. Year in College	-.09	-.15	-.29	-.05	.63**	-	.80	3.04	.98
7. Income	.05	-.16	.05	.02	-.09	.01	-	5.78	3.27
Overall <i>M</i>	-.14	-.17	1.40	-.21	19.74	1.79	5.55	-	-
<i>SD</i>	.12	.36	.71	1.18	2.90	1.06	2.99	-	-

*Note:* Numbers above the diagonals represent correlations among criminal justice students ( $n=45$ ). Numbers below the diagonals represent correlations among non-criminal justice students ( $n=47$ ).

\*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$

Hypothesis testing was then conducted. First, a dichotomous major variable was coded (1 = *criminal justice major*; 0 = *non-criminal justice major*). To test the effect of major on implicit criminal-self associations, IAT scores (implicit criminal-self association strength) were subjected to a one-way ANOVA. Hypothesis 1 was not supported, criminal justice majors ( $M = -.12$ ,  $SD = .12$ ) did not exhibit significantly stronger implicit associations between criminal and self when compare to those who were non-criminal justice majors ( $M = -.14$ ,  $SD = .12$ ),  $F(1, 90) = .50$ ,  $p = .483$ .

To test the effect of major on explicit criminal-self associations, an ANCOVA was used whereby the significant demographic variables were entered as controls, major was entered as the independent variable, and explicit criminal-self association scores were entered as the dependent variable. Hypothesis 2 was supported, criminal justice

majors did not exhibit significantly stronger explicit associations between criminal and self when compared to those who were non-criminal justice majors,  $F(1, 88) = .95$ ,  $p = .333$ .

To test Hypothesis 13, an ANOVA was conducted to determine if criminal justice majors differed from non-criminal justice majors in implicit famous criminal-self associations. Although there was a significant difference in implicit famous criminal-self association strength between criminal justice majors and non-criminal justice majors,  $F(1, 90) = 4.85$ ,  $p = .030$ , the difference was not in the predicted direction. Non-criminal justice majors exhibited stronger implicit associations between the self and well-known offenders ( $M = -.17$ ,  $SD = .36$ ) in comparison to criminal justice majors ( $M = -.35$ ,  $SD = .40$ ). Hypothesis 13 was not supported.<sup>5</sup>

To test Hypothesis 14, an ANOVA was conducted to determine if criminal justice majors differed from non-criminal justice majors in explicit famous criminal-self associations. In support of Hypothesis 14, criminal justice majors ( $M = -.65$ ,  $SD = 1.62$ ), did not exhibit significantly stronger explicit associations between the self and well-known offenders than non-criminal justice majors ( $M = -.21$ ,  $SD = 1.18$ ),  $F(1, 90) = 2.29$ ,  $p = .134$ .

Finally, to test Hypotheses 5, 15, 16, and 17 zero-order correlations were conducted to determine if there was a relation between measures of implicit and explicit criminal-self associations and implicit and explicit famous criminal-self associations. Among criminal justice students, implicit criminal-self association scores were not significantly correlated with explicit criminal-self association scores,  $r(45) = -.04$ ,  $p = .779$ ; neither with implicit famous criminal-self association scores,  $r(45) = -.01$ ,  $p = .942$ .

nor with explicit famous criminal-self association scores,  $r(45) = -.06, p = .691$ . Implicit famous criminal-self association scores were not significantly correlated with explicit famous criminal-self association scores,  $r(45) = .17, p = .261$  or with explicit criminal-self association scores,  $r(45) = .07, p = .661$ . Explicit measures (criminal-self and famous criminal-self association scores) were also not significantly correlated,  $r(45) = .15, p = .314$ . Correlations between implicit and explicit measures among the full sample were also conducted. The patterns were the same as the subsample of criminal justice students. Similar to the subsample of criminal justice students, the implicit and explicit measures were not significantly correlated. Hypotheses 5 and 15.

Among non-criminal justice students, implicit criminal-self association scores were not significantly correlated with explicit criminal-self association scores,  $r(47) = .02, p = .885$ ; neither with implicit famous criminal-self association scores,  $r(47) = -.26, p = .075$  nor with explicit famous criminal-self association scores,  $r(47) = -.08, p = .545$ . Implicit famous criminal-self association scores were not significantly correlated with explicit famous criminal-self association scores,  $r(47) = -.09, p = .546$  or with explicit criminal-self association scores,  $r(47) = -.05, p = .734$ . Explicit measures (criminal-self and famous criminal-self association scores) were also not significantly correlated,  $r(47) = -.19, p = .194$ . Hypotheses 16 and 17 were supported.

## **Discussion**

Study 3 examined the effect of majoring in criminal justice on the self-concept of criminal justice students. More specifically, Study 3 tested self-expansion using a sample of students and examined implicit and explicit criminal-self and famous criminal-self associations, potential consequences of self-expansion with offenders for students. The

results of this study did not find an effect of majoring in criminal justice on implicit criminal-self association strength (Hypothesis 1). However, results suggest that majoring in criminal justice does have an effect on implicit famous criminal-self association strength. It is important to note, this effect was not in the predicted direction, such that criminal justice students exhibited weaker implicit associations between the self and well-known offenders in comparison to non-criminal justice students (Hypothesis 13). As predicted there was no difference between criminal justice students and non-criminal justice students in explicit criminal-self and famous criminal-self association strength (Hypotheses 2 and 14). Moreover, there was no significant correlation between implicit and explicit measures for criminal justice students and non-criminal justice students (Hypotheses 5, 15, 16, and 17).

Past research on non-relational self-expansion has focused on the effect of novel and interesting experiences on self-concept size or on self-expansion with fictional characters. Study 3 extends the existing research as well as Studies 1 and 2 of this dissertation, and focuses on self-expansion in the context of indirect experiences with a group, rather than an individual, through academic experiences. Moreover, Study 3 focuses on implicit and explicit associations with a highly stigmatized group and well-known group members as potential consequences of self-expansion. Findings show that criminal justice students do not exhibit stronger implicit associations with the group criminal or well-known group members than non-criminal justice majors. This may suggest that indirect experiences with offenders are not sufficient to affect students' implicit associations. That is, it may be the case that self-expansion does not occur

between criminal justice students and the group criminal (see Chapter 7 for a discussion on theoretical limitations).

However, past self-expansion research highlights the importance of novel and interesting experiences in non-relational contexts. In the present study measures of novel and interesting academic experiences were not included in the study and it is therefore unclear if these effects may reflect pedagogical practices in criminal justice courses. Moreover, no information was collected regarding participants' direct relationships with offenders. Specifically, this study did not assess whether participants have any personal or professional relationships with offenders. These types of relationships may impact the extent to which people implicitly associate with offenders. Due to the aforementioned methodological limitations, it is unclear if criminal justice students can self-expand with the group criminal.

Results suggest that criminal justice students differed from non-criminal justice students with regard to implicit associations with well-known offenders. However, this effect was in the opposite of the predicted direction, such that non-criminal justice students exhibited stronger implicit famous criminal-self associations, in comparison to criminal justice students. Due to the nature of their studies, criminal justice students may be more attuned or aware of criminal justice issues in the media. As such, criminal justice students may be aware of the offending behaviors of the stimuli used in the famous criminal-self association IAT and this may have an opposite effect on their associations with these individuals. That is, rather than strengthening associations with well-known offenders, this may result in distancing the self from well-known offenders. This may potentially be due to the knowledge criminal justice students may have acquired about



the stimuli's offending behavior, as such due to the negative behavior of the stimuli criminal justice students may cognitively distance themselves from members of the group criminal. In contrast, non-criminal justice students may be unaware of the actual offenses committed by the stimuli and may only be aware of their criminal status. As a result, non-criminal justice students may hold favorable perceptions of the stimuli used in the IAT.

Although students differed in implicit famous criminal-self association strength, as predicted there was no difference between majors in explicit famous criminal-self association strength. This may reflect social desirability concerns of participants. Students are aware of the stigma surrounding being labeled a criminal and therefore may not be willing to report on their associations with the group or members of the group. Moreover, due to the nature of their coursework, criminal justice students may be particularly reluctant to explicitly report on associations with members of the group criminal. During their coursework, criminal justice students learn about the social and legal consequences of being criminal and the perceptions of others towards offenders which may further increase social desirability concerns for these students.

Further, implicit and explicit measures of criminal-self associations and famous criminal-self associations were not correlated. This is consistent with past research which demonstrates that implicit and explicit measures are unrelated when investigating socially sensitive subjects, such as race or sexuality (Greenwald et al., 2009a). One might anticipate that because there was no difference in implicit and explicit criminal-self association strength between majors, that the two should be highly correlated. However, implicit social cognition theory suggests otherwise because implicit and explicit cognitions are derived from different processes (Greenwald & Banaji, 1995). In this study

too, implicit and explicit criminal-self and famous criminal-self associations are uncorrelated among the entire sample, the subsample of criminal justice students, and the subsample of non-criminal justice students.

Interestingly, implicit measures of criminal-self and famous criminal-self associations were not correlated. This suggests that each measure may be tapping into different and potentially unrelated consequences of self-expansion. The extent to which people implicitly associate with a group as a whole may not be indicative of the extent to which they may associate with members of that group. This differs from previous examinations of self-expansion which find that associations with a close friend's ethnic group was also related to associations with the traits of the close friend's ethnic group (Page-Gould et al., 2010a). However, Study 3 differs from past self-expansion research in several important ways. Study 3 tests, 1) the extent to which people associate with a stigmatized acquired group status, that of criminal as opposed to a negative ascribed group status, 2) the effect of indirect experiences, primarily through classroom experiences, with a stigmatized group as a whole, rather than a single individual, and 3) associations with well-known members of a stigmatized group that individuals have indirect experiences with as opposed to traits related to the group. Given these differences, the consequences of self-expansion within the context of indirect experiences with offenders may not be the same as those which manifest in direct relationships with a single member of a different social group.

Finally, it may be the case that indirect experiences with the group criminal, through classroom experiences, may not be sufficient to affect implicit associations between the self-concept of students and the group criminal. However, it is worth noting,

that non-relational self-expansion has been found to be related to other consequences, such as increases in perspectives, knowledge, and abilities; consequences that were not been explored in the present study. Therefore, this study is limited in its scope with regards to understanding the full range of consequences of non-relational self-expansion within the context of criminal justice educational experiences.

## **Chapter 7: Discussion**

The studies in this dissertation research sought to examine the cognitive consequences of relationships or indirect experiences with offenders among three unique samples of non-criminal groups of people. Study 1 utilized a sample of people who have personal relationships with an offender, Study 2 utilized a sample of parole officers, and Study 3 utilized a sample of criminal justice students. These studies tested implicit criminal-self association strength as the primary measure of self expansion. This research provides a new lens through which to examine and understand the consequences of relationships and indirect experiences between pro-social individuals and offenders; specifically, a self-expansion and implicit social cognitive approach was taken to understand the processes underlying associations between self and the group criminal. This dissertation research is the first to examine the cognitive consequences of relationships and indirect experiences with offenders on the self-concept of non-criminal individuals. A previously developed measure of implicit criminal-self associations was used across all three studies, as well as two newly developed measures, the Implicit Criminal-Self Association GNAT (Study 1) and the Implicit Famous Criminal-Self IAT (Study 3).

This dissertation research is the first to examine implicit criminal-self association strength not as a result of personal experiences in the criminal justice system, but rather as a result of having relationships or indirect experiences with someone who has had such experiences. Further, it is the first to test self-expansion with a stigmatized acquired group status, that of criminal, and to provide initial evidence that people in personal relationships with offenders can exhibit differences in implicit criminal-self association

strength. Further, this work is the first to test self-expansion within the context of professional relationships and classroom experiences of criminal justice students. Taken together, this work adds to the current knowledge of the cognitive consequences of relationships and indirect experiences with a new group, offenders, and explores a previously unexamined area in the general criminological literature focused on the impact of relationships with offenders on the cognitions of pro-social individuals. This dissertation also extends social psychological knowledge of how contexts make salient implicit associations, specifically between the self and groups related to a close other to which an individual does not belong.

The present research utilized self-expansion and implicit social cognition theories to understand the processes by which the self-concept of those who have direct relationships and indirect experiences with offenders is impacted. The self-expansion model asserts that close relationships with others, or novel and interesting experiences in non-relational contexts, can result in the incorporation of knowledge that has been acquired from these relationships and experiences into the self-concept. People can include some aspects of the other person or aspects related to their experiences into their self-concept. That is, people may implicitly or explicitly associate with the close other and the groups to which he/she belongs (Aron et al., 2001; Coats et al., 2000; Page-Gould et al., 2010a).

### **Theoretical Considerations**

Taken together, the findings across all three studies provide minimal support for self-expansion with the group criminal among those who have direct relationships and indirect experiences with offenders. Specifically, in Study 1, there was no main effect of having a relationship, being reminded of a past experience, nature of the relationship, and

feelings of closeness with an offender. Exploratory analyses found that only participants who were high in closeness and were reminded of a past experience regardless of the valence of the experience, exhibited stronger implicit criminal-self association strength in comparison to participants who were high in closeness but were not reminded of a past experience. In Study 2, parole officers who were reminded of positive experiences exhibited stronger implicit criminal-self association strength in comparison to parole officers who were reminded of negative experiences. In Study 3, criminal justice students did not exhibit stronger implicit criminal-self and famous criminal-self associations in comparison to non-criminal justice students. Given the null findings pertaining to the factors that promote self-expansion (i.e., having a relationship/ experience, closeness) and inconsistent findings pertaining to the conditions that facilitate self-expansion (i.e., reminder of a positive experience), these findings may suggest that people may not self-expand with the group criminal.

Although prior research demonstrates that when self-expansion occurs, people can implicitly and explicitly exhibit associations with a close other (Aron et al., 1991), due to the negatively perceived status of the group criminal, it was predicted that, those who have personal relationships with offenders (Study 1) and criminal justice students (Study 3) would not exhibit explicit criminal-self associations. Indeed, there was no significant difference in explicit criminal-self associations across these dissertation studies. However, if people who have personal relationships with offenders and criminal justice students did in fact associate with the group criminal but were unwilling to report on their associations, it was expected that they would exhibit implicit criminal-self associations. However, there was also no difference in implicit criminal-self association strength based

on having a personal relationship with an offender (Study 1) or being a criminal justice student (Study 3). Given that there were no observed differences in not only explicit, but also implicit criminal-self association strength, these findings suggest that self-expansion simply does not occur with the social group criminal.

Interestingly, implicit criminal-self association strength varied under only under specific circumstances within specific relationships (Studies 1 and 2). Although previous research suggests that self-expansion occurs in close relationships, where people engage in frequent and positive experiences (Aron et al., 1991), results of this dissertation research, suggest that self-expansion with the group criminal may not require the three components of self-expanding relationships (i.e., close, frequent, and positive). Specifically, in personal relationships with offenders (Study 1) and professional relationships with offenders (Study 2), there were differences in implicit criminal-self association strength. However, the conditions under which implicit criminal-self association strength varied were not the same in each study. In personal relationships, only people who were reminded of a past experience, regardless of the valence of the reminder, AND felt close to an offender exhibited stronger implicit criminal-self association strength. In personal relationships, there was no main effect of the type of reminder. This suggests that closeness is the important construct and not positive interactions. In contrast, for parole officers, there was a main effect of the type of reminder, such that parole officers who were reminded of a positive experience exhibited stronger implicit criminal-self association strength, compared to those who were reminded of a negative experience.

These results may be attributed to the nature of each type of relationship (i.e., personal versus professional relationships). In personal relationships, people have a variety of experiences with each other, some positive and some negative, but regardless of these experiences, people are still connected to each other. In friendships, people choose to be connected to others, whereas in familial relationships, while some relationships are voluntary (e.g., partners, spouses), others are not (e.g., brother, mother), but regardless of the experiences within these relationships, people still feel close to each other. This may potentially explain why in Study 1, regardless of the type of experience participants were reminded of, stronger feelings of closeness were related to implicit criminal-self association strength.

It is important to note that Study 1 did not include a measure of frequency, therefore it is unclear how frequently participants interacted with the offender they were thinking of. However, some research suggests that frequency may not be as essential in facilitating self-expansion as feelings of closeness (Mashek et al., 2003). Mashek and colleague's (2003) demonstrated that self-expansion in the context of personal relationships is dependent on closeness rather than frequency. If this is the case, for those who have personal relationships with offenders, the combination of salient memories, regardless of their valence, and feelings of closeness may be those which are related to implicit criminal-self association strength, regardless of how frequently people interact with the offender.

In contrast to the findings of Study 1, there was a main effect of reminders of past experiences on implicit criminal-self association strength in Study 2. This may potentially be attributed to the nature of the parole officer-parolee relationship. In the parole officer-



parolee relationship, when a negative experience occurs, the relationship may be terminated (e.g., when a parolee violates the conditions of their parole) or undermined (e.g., hostility, loss of trust). Moreover, due to their occupational role, the interactions in the parole officer-parolee relationship are, to an extent, a reflection of the parole officer's ability to maintain and foster a positive relationship (Ireland & Berg, 2007). That is, the success or failure of a parolee is a reflection of the success or failure of the parole officer. As such, for parole officers, the nature of their experiences alone may impact implicit criminal-self association strength.

Unlike Study 1, Study 2 did not include a measure of closeness. Therefore, it is possible that there may also be an interaction between feelings of closeness and reminders of past experiences for parole officers. Similar to Study 1, Study 2 also did not include a measure of frequency. As such, the aforementioned is speculative, based on the differences between personal and professional relationships with offenders.

Also, Studies 1 and 2 did not include a measure of the dominant (largely positive or negative) types of experiences that participants have in their relationships with offenders. For example, do specific parole officers tend to have repeated positive interactions across many different parolees and situations, or do they tend to have repeated negative experiences? It is unclear if and how the dominant types of experiences that people engage in within personal and professional relationships with offenders impact implicit criminal-self association strength. Therefore, the aforementioned is based on the impact of salient memories on implicit criminal-self association strength, rather than all of the pre-requisites of self-expansion (see Chapter 8 for recommendations for future research).

Importantly, the above mentioned results do not indicate that participants in Studies 1 and 2 exhibited an association between themselves and the group criminal. Using the same IAT used in these dissertation studies, studies examining implicit criminal-self association strength of those who had personal experiences in the criminal justice system found that people were exhibiting positive implicit association scores, indicating an association between the self and the group criminal (Rivera & Veysey, 2014, 2018; Veysey & Rivera, 2017). In contrast, in the present research, across all three studies, participants were not exhibiting positive implicit criminal-self association scores. Rather, they were exhibiting negative scores, indicating they associate others with criminal as opposed to self.

This may potentially be due to the properties of the IAT. The IAT is a measure of relative associations (Greenwald et al., 1998). Implicit criminal-self association scores are calculated as the difference in reaction times between self and criminal versus other and criminal (see Chapter 3). It may be the case that people do in fact exhibit an association between self and criminal, however, they may more strongly associate others with criminal. Therefore the strength of association between other and criminal may be masking associations between self and criminal.

In the present research, IAT scores may indicate that participants were more neutral in their associations between themselves and the group criminal. In other words, they exhibited a decrease in the cognitive distance between their self-concept and the group criminal. Put another way, they were not distancing themselves from the group criminal as much as those who were not reminded of past experience or did not feel close

to the offender (family and friends; Study 1) and those who were reminded of a negative experience (parole officers; Study 2).

These findings are in contrast to prior studies of self-expansion that demonstrate that self-expansion should result in the association between the self and the traits and groups of a close other (Aron et al., 1991; Page-Gould et al., 2010a). That is, people do not exhibit a decrease in the cognitive distance between self and the other, but rather fully associate self with the other and their related traits (Page-Gould et al., 2010a). The findings of this dissertation suggest that people do not self-expand with the group criminal, and the results of this dissertation may be attributed to a different cognitive process. What is evident is that in personal relationships, salient memories, regardless of their valence, and stronger feelings of closeness (family and friends; Study 1) and reminders of positive experiences (parole officers; Study 2) are related to decreasing the cognitive distance between the self and the group criminal.

### **Self-Expansion and Implicit and Explicit Criminal-Self Associations**

While the findings of this dissertation research do not support self-expansion as the mechanism underlying cognitive changes for those who have relationships or indirect experiences with offenders, it may be the case that the consequences of this cognitive process with a negatively acquired group status, such as that of criminal, differ from the consequences of self-expansion with positive acquired or ascribed traits of a close other. Although past self-expansion research has examined associations with negatively perceived groups, such as racial-ethnic groups, this represents an ascribed group status; that is, a status with which people are born. Being labeled as an offender is an acquired status that is based on a person's actions and being officially processed by an agent of the criminal justice system (i.e., arrested, convicted and/or incarcerated) with the

understanding that individuals may be wrongly accused and/or convicted. Given this distinction, the consequences of self-expansion with offenders may not be the same as those previously observed with positive acquired traits or ascribed groups.

Prior examinations of self-expansion have examined explicit consequences of relationships and experiences using different measures than those used in this dissertation research. Relational self-expansion has often been measured by examining the extent to which people associate themselves with the close other, using the Inclusion of the Other in the Self (IOS) scale (Aron et al., 1992). The IOS scale is a self-report measure in which participants indicate how close they feel to another person by selecting one of seven pairs of circles that represent varying degrees of overlap between the self and another person. Non-relational self-expansion has been measured by examining self-descriptions. The number of self-descriptions people associate with is a measure of self-concept size, an indicator of self-expansion (Mattingly & Lewandowski, 2014a, 2014b, 2013). These are explicit indicators of self-expansion which have been unexplored in the present dissertation. Therefore, it is possible that people who have relationships or indirect experiences with offenders may exhibit explicit consequences of self-expansion that have not been measured in the present research. As such, this dissertation research is limited in its scope with regards to understanding the full range of consequences of self-expansion in relationships with offenders. Future research then, might consider utilizing other measures of self-expansion (e.g., IOS scale) to fully understand the consequences of relationships and indirect experiences with offenders on explicit cognitions.

In addition, there was no main effect of having a personal relationship with an offender (Study1) on implicit criminal-self association strength. However, it may be the

case, that people who have a personal relationship with an offender may self-expand with him/her, but may implicitly associate with his/her other identities or traits. Most, if not all, people have multiple identities (Ellemers, Spears, & Doosje, 2002; Oakes, 1987; Schnabel & Asendorpf, 2010; Turner et al., 1994). For those who have had criminal experiences, being a “criminal” is just one identity out of number of other identities (e.g., woman, employee). Moreover, while people with criminal justice experience might identify explicitly or implicitly as a criminal, there may other chronic identities and traits that are more central to the individual and/or are more readily activated on a daily basis; a salience hierarchy of identities (Stryker 1968; 1980). Further, while people can associate with positive and negative identities and traits, people associate more strongly with the positive traits and groups to which they belong (Greenwald et al., 2002). Like those with criminal justice experience, within relationships there is likely to be an identity hierarchy for close others. Therefore, it may be the case that people in relationships with offenders are, in fact, self-expanding with other traits or groups associated with that close other, depending on the close other’s (i.e., offender’s) various identities and their relative salience hierarchy.

Unlike the present research, prior examinations of self-expansion have examined implicit consequences of relationships using a “me/not-me” procedure. The “me/not-me” procedure is based on the idea that the degree to which the self and other are associated is reflected in reaction times when characterizing multiple traits and identities as self-descriptive (Aron et al., 1991; Aron et al., 2001; Page-Gould et al., 2010a). The design of the task allows for the measurement of associations with the person as a whole, rather than just one trait or identity. In contrast, the IAT, only measures associations with one

group or trait related to the close other. Therefore, it is possible that people who have relationships or indirect experiences with offenders may exhibit implicit consequences of self-expansion that have not been measured in the present research. Future research then, might consider utilizing other implicit measures of self-expansion (e.g., me/not me procedure, multiple IATs) to fully understand the cognitive consequences of relationships with offenders on implicit cognitions.

It is also plausible, that even though those who have personal relationships with offenders and criminal justice students may self-expand with other aspects of offenders, they may specifically resist implicitly associating with the group criminal. That is those in personal relationships with offenders and criminal justice students may implicitly work to overcome associating with the group criminal. Due to their unique relationships and educational experiences, both groups are aware of the stigma, and social and legal consequences related to being labeled as an offender. Those in personal relationships with offenders and criminal justice students learn about the experiences of offenders and the stigma they experience inside and outside of the criminal justice system. In personal relationships, legal and common practices, such as when parole or probation officers conduct random house checks, or being required to disclose one's criminal history to a prospective employer, may serve as constant reminders for the offender and those in their social networks of the effects of contact with the criminal justice system. As such, because both groups are aware of the negative consequences of being labeled as an offender or being associated with an offender they may implicitly resist being associated with group criminal. Schwager and Rothermund (2014) note that when individuals feel as if their goals are threatened, they may implicitly work protect their goal and overcome

any information that counters that goal. Applied to those who have personal relationships with offenders, if someone feels that his or her efforts of not associating with the group criminal are threatened, he or she will implicitly work to inhibit any information that counters that goal. Similarly, for a criminal justice student, if his or her efforts of not associating with the group criminal are threatened, he or she will implicitly work to inhibit any information that counters that goal.

Schwager and Rothermund's (2014) theory may also help to explain why criminal justice students exhibited weaker implicit famous criminal-self association strength in comparison to non-criminal justice students. Due to the nature of their studies, criminal justice students may be more attuned or aware of criminal justice issues in the media. As such, criminal justice students may be aware of the offending behaviors of the stimuli used in the famous criminal-self association IAT. That is, rather than strengthening associations with well-known offenders, their knowledge related to crime and offending may result in the motivation to distance themselves from well-known offenders. If criminal justice students work to distance themselves from the group criminal and related individuals, when students felt that their efforts to distance themselves were threatened, they implicitly worked even harder to overcome being associated with well-known group members. This may potentially explain why non-criminal justice students exhibited stronger implicit famous criminal-self associations in comparison to criminal justice students. Non-criminal justice students may be unaware of the actual offenses committed by the stimuli in the IAT and may only be aware of their criminal status, therefore maintaining favorable perceptions of the well-known individuals, regardless of their criminal status.

**Malleability of implicit criminal-self associations.** The results of this dissertation demonstrate the importance of salient memories in guiding cognitions. Findings from Studies 1 and 2 suggest that in relationships with offenders, implicit criminal-self association strength is malleable and is dependent to some degree on the extent to which the memory of (and, to some extent, the nature of the relationship with) the offender is accessible. By having participants describe an interaction they had with an offender, concepts that were associated with the offender were activated and temporarily linked to the self in memory. In Study 1, this occurred regardless of the valence of the reminder, as long as participants felt close to the offender. In Study 2, this only occurred when parole officers were reminded of a positive experience.

This suggests that consequences of self-expansion are not chronically accessible and that the cognitive consequences of personal and professional relationships are dependent on contexts in which the self is placed. This is in line with past research which demonstrates that participants only exhibited associations with a cross-group friend's ethnic group when the memory of their cross-group friend was made salient (Page-Gould et al., 2010a). While Studies 1 and 2 utilized a writing task to make salient a memory with an offender, there are real world contexts in which people can be reminded of an offender with whom they are close. In personal relationships, this may include places that look similar to those in which people engaged in a memorable experience, encountering a person who looks or behaves similarly to the close other, or watching a television show or news highlighting crime related subjects. For parole officers, this may occur while exchanging information with other parole officers about parolees or when encountering other parolees who look or behave similarly to a specific parolee. This is not an



exhaustive list, but it does suggest that in the real world, there are a number of contexts that can make salient the memory of an offender with whom one is in a relationship. This in turn can impact implicit criminal-self association strength and may have implications on behaviors.

### **Implications of Self-Expansion and Implicit Criminal-Self Associations**

Prior research has found that self-expansion has implications for interpersonal relationships as well as behaviors of individuals. In relationships, self-expansion has been found to be related to relationship maintenance, commitment, and satisfaction (Aron et al., 2000; McIntyre et al., 2014). In non-relational contexts, self-expansion has been found to be related to self-efficacy (Mattingly & Lewandowski, 2013). Such benefits may be due to the increase in perspectives, resources, and characteristics which the self acquires when self-expansion occurs (Hoffner et al., 2016; Xu et al., 2010, 2016). Therefore, in theory, despite the negative status of the group criminal, to the extent that people exhibit an implicit criminal-self association, they may still acquire perspectives, resources, and characteristics offered by the offender. This may have implications for interpersonal relationships with offenders as well as behavioral implications for those who may acquire an implicit criminal-self association as result of their direct relationships and indirect experiences with offenders.

**Empathy.** This dissertation has potential implications in understanding empathy in general and towards offenders in particular. How might self-expansion be related to empathy? Self-expansion results in the acquisition of perspectives, causing the self to be concerned with the needs of the other (Aron & Aron, 1986; Aron & Aron, 2001; Deutsch & Macksey, 1985; Wegner, 1980). Similar to this, empathy requires one to take the

perspective of the other (Batson, 2009). Therefore it is plausible that empathy may stem from self-expansion or vice versa (Wegner, 1980). If this is the case, this may provide a new methodology by which empathy can be measured implicitly. Applied to the present research, the extent to which people exhibit implicit associations with the group criminal may also be indicative of the extent to which they exhibit empathy towards the group.

In helping fields, empathy is an essential component of the therapeutic relationship, and can facilitate collaboration, trust, and understanding between the practitioner and client (Murphy & Baxter, 1997) and is related to positive client outcomes (McCambridge, Day, Thomas, & Strang, 2011; Ross, Polaschek, & Ward, 2008; Taxman, 2002; Taxman & Ainsworth, 2009). Empathy is also related to bonding, feelings of closeness, and attitudes towards stigmatized groups (Batson, Chang, Orr & Rowland, 2002; Dovidio, Allen, & Schroeder, 1990; Finlay & Stephan 2000). This, in turn, results in changes in behavior, such as helping the other. This is because empathy promotes compassion and concern for the other (Batson et al., 2002).

If this is the case, people implicit criminal-self association strength may be a reflection of who self-expand with offenders may in turn exhibit increased empathy, which can potentially be related to helping the other and may ultimately be related to offender success. Those in both personal and professional relationships with offenders who are able to empathize, may be more likely to identify criminogenic and non-criminogenic needs of those with whom they have relationships and help offenders overcome obstacles related to long-term desistance (Gunnison & Helfgott, 2011).

Empathy is also important for students. Because empathy has been found to be related to helping behaviors and improved attitudes towards stigmatized groups, self-

expanding academic experiences may then be related to improving perceptions towards offenders and how students perform their occupational functions beyond their time at college. Research has demonstrated a negative relationship between empathy and punitive attitudes among college students (Courtright et al., 2005). Therefore, for students implicit criminal-self association strength may be related to increased empathy, thereby attenuating punitive attitudes towards offenders. Many criminal justice students continue to work in the criminal justice system as policy makers or practitioners after their time in college. They have opportunities to influence and implement crime control policies. Therefore, the extent to which self-expansion is related to improving students' attitudes and perceptions towards offenders may influence their actions towards offenders, and the policies, and practices that they support and implement. Therefore, increasing empathy may be related to a reduction in punitive practices and policies and may help to promote rehabilitative practices and policies, which may improve the effectiveness of the criminal justice system.

**Criminal Behavior.** On the other hand, implicit criminal-self association strength may have negative outcomes; specifically, criminal behavior. A fundamental hypothesis of implicit social cognition theory is that self-related cognitions can guide behaviors (Oyserman, Elmore, & Smith, 2012). Several studies demonstrate that implicit associations can predict behavioral outcomes (Greenwald et al., 2009a; Kurdi et al., 2018). In socially sensitive domains related to the self-concept, implicit associations have been found to have greater predictive validity in explaining behavioral outcomes above and beyond those of explicit associations (Nock et al., 2010; Rivera & Veysey, 2018). For example, implicit associations can predict outcomes, such as academic performance

(Nosek, et al., 2002) as well as health and physiological well-being (Nock et al., 2010). In the domain of implicit criminal-self associations, one study has demonstrated the relation between implicit criminal-self association strength and criminal behavior (Rivera & Veysey, 2018). Rivera and Veysey (2018) show that implicit criminal-self association strength was the strongest predictor of criminal behavior above and beyond explicit criminal-self association strength and related demographic variables (Rivera & Veysey, 2018). This suggests that implicit cognitions may be useful in understanding the impact of implicit criminal-self associations on criminal behavior.

By extension, this may suggest that implicit criminal-self association strength may also be predictive of the onset of criminal behavior for non-criminal individuals. Self-expansion may help to explain the underlying cognitive mechanism by which non-criminal individuals in relationships with delinquent others learn to engage in criminal behavior. While studies suggest that parental (Dallaire, 2007) and peer deviance (Lipsey & Derzon, 1998) are predictors of criminal behavior, the mechanism by which this occurs has not been explained by the criminological literature. Self-expansion may potentially complement existing criminological theories, such as social learning theories and explain the underlying cognitive mechanism by which non-criminal individuals become criminal through identity development.

Sutherland (1947) argues that criminal behavior occurs through experiences and relationships in which people learn definitions related to criminal behavior, such as the motivations, techniques, and rationale related to engaging in crime. Moreover, relationships and experiences in which people engage in frequently, are intimate, and are closer in nature are more likely to promote criminal behavior. However, Sutherland does

not explain the mechanism by which this may occur. Implicit social cognition may serve to elucidate the underlying cognitive processes which may help explain how people become criminal through associations with close others who have criminal justice experience. According to implicit social cognition theory, significant relationships or experiences provide people with opportunities to associate with new identities or traits. These experiences provide people with new cognitive resources and knowledge, which can be used to guide behaviors in contexts when a given identity or trait is salient. As a result, the non-criminal self may exhibit an implicit criminal-self association. The extent to which non-criminal individuals exhibit an implicit criminal-self association may be indicative of the extent to which the self has adopted definitions related to offending. As such, similar to implicit criminal-self association strength of non-criminal individuals may be predictive of criminal behavior. However, the present dissertation research can not answer questions of the impact of implicit criminal-self association strength on the onset of criminal behavior of non-criminal individuals who have relationships or indirect experiences with offenders. The above is speculative based on findings from prior research. Future research using longitudinal studies are necessary to examine the link between implicit criminal-self association strength and behavioral outcomes of relationships or indirect experiences with offenders.

## **Chapter 8: Limitations, Implications and Conclusions**

The present work established that people in direct relationships with offenders exhibit variations in implicit criminal-self association strength. These findings set the foundation for future research on self-expansion with offenders. Despite the contributions of this dissertation research, these studies are not without their limitations. This chapter first addresses some of the limitations of this dissertation research and suggests future directions. Based on the findings of this research, this dissertation concludes by discussing implications for policies and practices.

### **Limitations and Future Directions**

This dissertation research is the first known work to measure implicit criminal-self association strength among non-criminal individuals based on their relationships or indirect experiences with offenders. However, some questions remain regarding implicit self and identity processes among these individuals. First, the definition of offender in the present work is conservative in that it only includes individuals who have had formal contact with the criminal justice system; specifically, an arrest, conviction, and/or incarceration. Individuals can engage in criminal behavior, but may not be formally labeled as such (Becker, 1963). However, despite not being formally labeled as an offender, non-criminal individuals within their social networks, such as family members and friends, may be aware of their criminal behavior (as well as the offender him/herself) (Goffman, 2014). Rivera and Veysey (2018) demonstrate that people who have engaged in behavior that they *could* have been arrested for, did, in fact, exhibit an implicit criminal-self association. Therefore, the extent to which non-criminal individuals associate with the group criminal, may be dependent on the criminal behavior of the

other, regardless of the designation of a formal label. In other words, if the close other associates with the group criminal, based only on their behavior, non-criminal individuals in their social networks may also exhibit associations with the group criminal, because it is a group that belongs to a close other. Even in the absence of formally being labeled as an offender, those in relationships with persons who commit acts for which they could have been arrested may still acquire knowledge, perspectives and resources related to crime and criminality because of the close others involvement in criminal behavior. This may potentially explain why there was no main effect of having a relationship with an offender in Study 1. That is, people who indicated not having a relationship with an offender, may have had relationships with others involved in criminal behavior, but were not formally labeled as such. Therefore, it is possible that these individuals may exhibit implicit criminal-self associations. To address this limitation, future studies may benefit by including measures of criminal behavior of a close other, in addition to the existing measure of criminal justice contact of a close other. Furthermore, it would important for future work to differentiate between criminal behavior and criminal justice contact as both may have different consequences on implicit criminal-self association strength.

An important limitation of the current work is the ability to draw causal inferences about the effects of relationships or indirect experiences on implicit criminal-self association strength. Specifically, this dissertation research argues that individuals who have direct relationships or indirect experiences with offenders will implicitly associate with the group criminal. However, it is possible that participants can obtain knowledge which impacts implicit criminal-self association strength from other sources. For example, in personal relationships people may develop implicit criminal-self

associations from occupational or academic experiences (e.g., working in the criminal justice system, majoring in criminal justice). In professional relationships, people may have personal relationships with offenders or academic experiences that may facilitate the development of an implicit criminal-self association. Moreover, students may have professional and personal relationships that may impact implicit criminal-self association strength. Also, experiences, such as watching crime related television shows or movies, may serve to promote implicit criminal-self association strength, even in the absence of engaging in direct relationships or indirect experiences with offenders. Across all three groups, these experiences may have an additive effect on implicit criminal-self association strength. To address this limitation, rigorous testing is necessary to measure the effect of various sources of exposure that may impact implicit criminal-self association strength and behavior.

The present study is based on the fundamental hypothesis that close relationships or indirect experiences with offenders should yield a mental association between the non-criminal self and the group criminal. However, it is still unclear whether implicit criminal-self associations are antecedents to entering relationships with offenders, choosing occupations in which one works with offenders, and selecting a major in criminal justice and related subjects. To the extent that people possess implicit criminal-self associations, this may drive selection into relationship, occupations, and academic experiences related to their implicit cognitions. That is, people self-select into these relationships, professions and majors because they already associate in some way with the group criminal or are interested in crime and related subjects.



Alternatively, engaging in relationships or indirect experiences with offenders can lead to implicit criminal-self associations which is consistent with the self-expansion and implicit social cognition literature on the role of relationships and experiences on self-concept changes. According to self-expansion theory, relationships with others or novel and interesting experiences should lead to changes in the self-concept and the association between the self and traits or characteristics related to a close other, outside of conscious awareness or control. From this perspective, engaging in these relationships and experiences is the antecedent to developing an implicit criminal-self association for non-criminal individuals. Future research using longitudinal studies that follow individuals over time and measures implicit criminal-self association strength at various points in time are necessary to support the assumption underlying relationships and experiences with offenders and implicit criminal-self associations.

Moreover, longitudinal research would help to provide a baseline of implicit criminal-self association strength. This would help to determine if and how implicit criminal-self association strength varies over time. Although Study 1 included measures of the nature of the relationship, it did not ask participants to indicate how long they have been in the relationship and whether or not they were still in the relationship they were describing. Moreover, correlational analyses in Study 2 do not show a correlation between implicit criminal-self association strength and years as a parole officer. Although Study 3 included a measure of year in school, there were not enough participants across each academic level to draw conclusions. Of the criminal justice students in Study 3, 78% of them were upperclassmen.

Therefore, the present study cannot answer questions regarding changes in implicit criminal-self association strength over time in direct relationships and indirect experiences with offenders. In personal and professional experiences, a longitudinal study would answer questions of the effects of relationship duration and dissolution on implicit criminal-self association strength. How does relationship duration and dissolution affect implicit criminal-self association strength? How does the method of dissolution affect implicit criminal-identity strength across relationships (e.g., breakup, death, violation of parole, successful completion of parole)? Moreover, for criminal justice students, how do certain classes have an effect on implicit criminal-self association strength? How does implicit criminal-self association strength change over time in college? To address these limitations, longitudinal research is necessary to measure implicit criminal-self association strength several times over the course of the relationship or time in college, immediately after the relationship is terminated or upon completion of college, and then to follow up for a period of time to examine implicit criminal-self association strength over time, as well as behaviors related to implicit criminal-self association strength.

Relatedly, while Studies 1 and 2 examine the effect of reminders of past experiences with an offender, these studies do not answer the question of the effect of repeat experiences on implicit criminal-self association strength. Do those who have a positive experience with an offender repeatedly engage in positive experiences with offenders in their relationships? If so, those who frequently engage in positive experiences with offenders may exhibit self-expansion even in the absence of contexts which facilitate positive experiences, which is expected to translate into continuous positive experiences with offenders. This is squarely in line with research that

demonstrates that individuals who had positive relationships with cross-group friends did not exhibit stress or anxiety following conflict (Page-Gould, 2012). In these relationships, negative experiences with offenders may occur, but those who self-expand may be better equipped to overcome such experiences, thereby potentially improving their overall well-being. One way to measure repeat experiences may be to employ a daily diary methodology used in past self-expansion studies (Page-Gould, 2012; Waugh & Fredrickson, 2006). Using a daily diary method for several days can be used to test if there is a pattern in the types of experiences people have in their relationships with offenders and to examine the effects of these experiences on implicit criminal-self association strength.

Finally, while Study 3 examined the effect of college major on implicit criminal-self associations, it is limited in its ability to draw causal inferences about the effects of academic experiences on self-expansion. Several studies emphasize the importance of novel and interesting experiences on non-relational self-expansion (Mattingly & Lewandowski, 2013). These experiences can occur cognitively or physically. The results of Study 3 may reflect pedagogical practices of criminal justice courses. It may be the case that criminal justice courses do not provide students with interesting and novel opportunities required for self-expansion. However, the present study did not include measures of novel and interesting experiences. To address this, future studies of self-expansion with offenders would benefit by including measures of novel and interesting academic experiences. In addition, future studies may benefit by using pre- and post-test designs to test the effects of specific novel and interesting classroom experiences (e.g., a

guest lecture by an offender, visiting a correctional facility, taking a course on restorative justice) on self-expansion.

### **Policy and Practice Implications**

Chapter 7 discussed the potential behavioral implications of implicit criminal-self association strength on those who have relationships or indirect experiences with offenders. The following section outlines potential policy and practice implications.

If implicit criminal-self association strength is related to empathy, it may be beneficial to promote interactions and experiences that strengthen implicit criminal-self association of non-criminal individuals. Based on the results of Study 1, one way to strengthen implicit criminal-self association among those who have personal relationships with offenders may be to provide opportunities for members of different groups to interact with each other in a positive way that also enhances closeness. For example, one way to increase closeness is by utilizing activities that promote self-disclosure, that, in turn, provide both individuals with opportunities to take the perspective of the other and acquire new cognitive resources. Theoretically, this will result in a decrease the cognitive distance between the non-criminal self and the group criminal.. To encourage closeness, Aron and colleagues (1997) designed a questionnaire to promote reciprocal self-disclosure and intimacy related behaviors. They found that participant dyads that answered the questionnaire exhibited greater feelings of closeness in comparison to participant dyads that did not answer the questionnaire. Moreover, participants who completed the questionnaire exhibited relationship maintenance seven weeks after completing the task (Aron et al., 1997). Adapting a similar type of questionnaire for those in personal relationships with offenders may help to decrease

cognitive distance between non-criminal individuals and the offender, which may help to promote empathy. This can be disseminated through marriage and family counseling programs. Promoting closeness in personal relationships may influence relationship quality, commitment, and satisfaction, which may protect against relationship dissolution. Moreover, this may benefit the offender, insofar as people who exhibit a decrease in the cognitive distance between themselves and the offender, may be more likely to identify and help offenders overcome obstacles related to desistance.

Not only is empathy related to helping behaviors, but also a reduction of punitive attitudes (Mackey & Courtright, 2000). Therefore, criminal justice academic programs and instructors should modify curricula to include material that decrease the cognitive distance between students and offenders. This can be done by potentially using novel and interesting ways of presenting course content. With regard to the academic experiences of criminal justice students, Stinchcomb (2002) suggests, “[students] can attend lectures...participate in discussions, write papers, and pass tests. But they cannot really feel it. And until they do, they are not likely to be influenced by it” (p. 468). He suggests that unless students can empathize with offenders, they are unlikely to change their thoughts towards offenders or the criminal justice system (Stinchcomb, 2002). Experiential learning opportunities may provide students with novel and interesting experiences through which they can understand the perspectives of those involved in the criminal justice system. Such activities may include bringing in offenders as guest lecturers and tours of correctional facilities. Experiential learning experiences provide students with opportunities to interact with others that they may not otherwise meet and provide them with new perspectives and knowledge (Brody & Wright, 2004). This, in

turn, may reduce the cognitive distance between the self-concept of students and offenders and may result in including aspects, especially perspectives, of offenders into their self-concept. Because experiential learning opportunities are expected to promote empathy, which is also likely to reduce punitive attitudes towards offenders, which may be beneficial for students who become employed in criminal justice related occupations such as practitioners or policy makers.

Understanding the feelings and perspectives of offenders may help to promote better relationships between clients and practitioners by promoting empathy. Specifically, in the context of parole, one way to decrease the cognitive distance between practitioners and clients is to provide environments that foster positive experiences between parole officers and parolees. Because reminders of positive experiences were found to be associated with stronger implicit criminal-self associations, activities which foster positive experiences between parole officers and parolees may facilitate empathy. For example, participating in community service activities or sporting events can promote positive experiences between parole officers and parolees. These activities provide novel ways for parole officers to interact with parolees and may increase closeness. Moreover, encouraging practices such as Motivational Interviewing, may help to strengthen implicit criminal-self association strength. Motivational Interviewing has been increasingly adopted by corrections agencies due to its positive effect on parolees (Dowden & Andrew, 2004; Landerberger & Lipsey, 2005), but may also have benefits for parole officers. Because Motivational Interviewing promotes rapport and requires the parole officer to take the perspective of the parolee, it is therefore possible that Motivational Interviewing may also provide parole officers with opportunities to acquire the

perspective of their parolees. This may facilitate positive experiences with parolees as the parole officer has gained the perspective of the parolee. This may in turn promote parole officer helping behaviors towards parolees as they assist parolees in successful re-entry and long term desistance.

In the absence of these experiences, reminding parole officers of positive or successful experiences with parolees, may serve to make salient implicit criminal-self associations, which may then have an effect on behaviors towards other parolees. This can be though the use of a bulletin board which showcases events in which parole officers and parolees work together or highlighting the accomplishments of parolees (e.g., at school, at work). This may serve as a reminder of the successful and positive experiences between parole officers and parolees, and may translate into helping behaviors towards parolees that parole officers interact with in that environment.

If in fact implicit criminal-self association strength is related to criminal behavior, it may be beneficial to bolster pro-social identities of those who have relationships with offenders as well as offenders themselves. For those who have engaged in criminal behavior, research suggests that associations with the group criminal can be attenuated by encouraging associations with a positive identity. For example, individuals with a criminal history who adopted new identities (e.g., husband, father) exhibited a reduction in criminal behavior (Bachman, et al., 2016; Sampson & Laub, 2005). If this is the case, one way to reduce the risk of criminal behavior for these individuals is to support the pro-social identities of offenders, from which non-criminal individuals with whom they have relationships with can associate. Also, for non-criminal individuals who may be at the greatest risk of exhibiting implicit criminal-self associations with opportunities to build,

strengthen, and maintain relationships with pro-social individuals can potentially reduce the risk of engaging in criminal behavior. It may be beneficial for those who have relationships or experiences with offenders to be provided with counseling services. This could easily be provided by employers and academic programs in which people may be at risk of developing implicit criminal-self associations.

## **Conclusions**

While criminal justice research has established that relationships and experiences with offenders can have an effect on those who interact with them, it has overlooked the cognitive changes these individuals may experience. Primarily, research has established that pro-social individuals can promote cognitive changes for the offender (Giordano et al., 2002, 2007; Maruna, 2001). This dissertation research is the first criminological study to apply self-expansion theory and implicit social cognition theory and measurement to understand the cognitive effects of relationships with offenders on non-criminal individuals. This dissertation is a preliminary step in understanding how such individuals may implicitly and explicitly associate their self-concept with the group criminal. This research provides an opportunity for future researchers to examine the effects of implicit criminal-self association strength on empathy and criminal behavior of those who have relationships with offenders. Future research, coupled with changes in policy and practice, can potentially improve relationships between pro-social individuals and offenders, reduce the risk of criminal behavior, and may have positive downstream consequences on offenders; namely increased desistance- a primary goal of the criminal justice system.



## References

- Abadinsky, H. (2009). *Probation and parole: Theory and practice*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Agnew, C. R., Van Lange, P. A., Rusbult, C. E., & Langston, C. A. (1998). Cognitive interdependence: Commitment and the mental representation of close relationships. *Journal of personality and social psychology*, 74(4), 939-954.
- Amodio, D. M., & Devine, P. G. (2006). Stereotyping and evaluation in implicit race bias: evidence for independent constructs and unique effects on behavior. *Journal of personality and social psychology*, 91(4), 652-661.
- Andrews, D. A. (2011). The principles of effective correctional programs. In E.J. Latessa & A.M. Holsinger (Eds.), *Correctional contexts: Contemporary and classical Readings*, (pp. 228-237). New York, NY: Oxford University Press.
- Arditti, J. A., Lambert-Shute, J., & Joest, K. (2003). Saturday morning at the jail: Implications of incarceration for families and children. *Family relations*, 52(3), 195-204.
- Aron, A., & Aron, E. N. (1986). *Love and the expansion of self: Understanding attraction and satisfaction*. Hemisphere Publishing Corp/Harper & Row Publishers.
- Aron, E. N., & Aron, A. (1996). Love and expansion of the self: The state of the model. *Personal Relationships*, 3(1), 45-58.
- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of Other in the Self Scale and the structure of interpersonal closeness. *Journal of personality and social psychology*, 63(4), 596.
- Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of personality and social psychology*, 60(2), 241.
- Aron, A., Melinat, E., Aron, E. N., Vallone, R. D., & Bator, R. J. (1997). The experimental generation of interpersonal closeness: A procedure and some preliminary findings. *Personality and Social Psychology Bulletin*, 23(4), 363-377.
- Aron, A., Norman, C. C., Aron, E. N., McKenna, C., & Heyman, R. E. (2000). Couples' shared participation in novel and arousing activities and experienced relationship quality. *Journal of personality and social psychology*, 78(2), 273-284.
- Aron, A., Paris, M., & Aron, E. N. (1995). Falling in love: Prospective studies of self-concept change. *Journal of Personality and Social Psychology*, 69(6), 1102-1112.

- Asencio, E. K. (2011). Familiarity, legitimation, and frequency: The influence of others on the criminal self-view. *Sociological Inquiry*, 81(1), 34-52.
- Asencio, E. K., & Burke, P. J. (2011). Does incarceration change the criminal identity? A synthesis of labeling and identity theory perspectives on identity change. *Sociological Perspectives*, 54(2), 163-182.
- Asendorpf, J. B., Banse, R., & Mücke, D. (2002). Double dissociation between implicit and explicit personality self-concept: The case of shy behavior. *Journal of personality and social psychology*, 83(2), 380-393.
- Asgari, S., Dasgupta, N., & Stout, J. G. (2012). When do counterstereotypic ingroup members inspire versus deflate? The effect of successful professional women on young women's leadership self-concept. *Personality and Social Psychology Bulletin*, 38(3), 370-383.
- Bachman, R., Kerrison, E., Paternoster, R., O'Connell, D., & Smith, L. (2016). Desistance for a long-term drug-involved sample of adult offenders: The importance of identity transformation. *Criminal Justice and Behavior*, 43(2), 164-186.
- Banse, R., Seise, J., & Zerbes, N. (2001). Implicit attitudes towards homosexuality: Reliability, validity, and controllability of the IAT. *Zeitschrift für experimentelle Psychologie*, 48(2), 145-160.
- Batson, C. D. (2009). These things called empathy: eight related but distinct phenomena. In J. Decety & W. Ickes (Eds.), *The social neuro-science of empathy* (pp. 3-15). Cambridge, MA: MIT Press.
- Batson, C. D., Chang, J., Orr, R., & Rowland, J. (2002). Empathy and attitudes: Can feeling for a member of a stigmatized group improve feelings toward the group?. *Journal of Personality and Social Psychology*, 72(1), 1656-1666.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.
- Becker, Howard S. 1963. *Outsiders: Studies in the Sociology of Deviance*. New York: Free Press.
- Becker, T. E., & Kernan, M. C. (2003). Matching commitment to supervisors and organizations to in-role and extra-role performance. *Human performance*, 16(4), 327-348.

- Blasko, B. L., Friedmann, P. D., Rhodes, A. G., & Taxman, F. S. (2015). The Parolee–Parole Officer Relationship as a Mediator of Criminal Justice Outcomes. *Criminal justice and behavior*, 42(7), 722-740.
- Bluemke, M., & Frieze, M. (2006). Do features of stimuli influence IAT effects? *Journal of Experimental Social Psychology*, 42, 163-176.
- Boduszek, D., Adamson, G., Shevlin, M., & Hyland, P. (2012). Development and validation of a Measure of Criminal Social Identity within a sample of Polish recidivistic prisoners. *Criminal Behaviour and Mental Health*, 22(5), 315-324.
- Boduszek, D., Adamson, G., Shevlin, M., Mallett, J., & Hyland, P. (2013). Criminal social identity of recidivistic prisoners: The role of self-esteem, family and criminal friends. *Journal of Police and Criminal Psychology*, 28(1), 15-25.
- Boduszek, D., & Hyland, P. (2011). The theoretical model of criminal social identity: Psycho-social perspective. *International Journal of Criminology and Sociological Theory*, 4(1), 604-615.
- Bohm, R. M., & Vogel, R. E. (1991). Educational experiences and death penalty opinions: Stimuli that produce changes. *Journal of Criminal Justice Education*, 2(1), 69-80.
- Boldero, J. M., Rawlings, D., & Haslam, N. (2007). Convergence between GNAT-assessed implicit and explicit personality. *European Journal of Personality: Published for the European Association of Personality Psychology*, 21(3), 341-358.
- Bosson, J. K., Swann Jr, W. B., & Pennebaker, J. W. (2000). Stalking the perfect measure of implicit self-esteem: The blind men and the elephant revisited?. *Journal of personality and social psychology*, 79(4), 631-643.
- Brennan, P. K., & Vandenberg, A. L. (2009). Depictions of female offenders in front-page newspaper stories: The importance of race/ethnicity. *International Journal of Social Inquiry*, 2(2), 141-175.
- Brenner, M. (1973). The next-in-line effect. *Journal of Verbal Learning and Verbal Behavior*, 12, 320-323.
- Brezina, T., & Topalli, V. (2012). Criminal self-efficacy: Exploring the correlates and consequences of a “successful criminal” identity. *Criminal Justice and Behavior*, 39(8), 1042-1062.
- Brody, S. M., & Wright, S. C. (2004). Expanding the self through service-learning. *Michigan Journal of Community Service Learning*, 11(1), 14-24.

- Bui, H. N., & Morash, M. (2010). The impact of network relationships, prison experiences, and internal transformation on women's success after prison release. *Journal of Offender Rehabilitation*, 49(1), 1-22.
- Bureau of Justice Statistics (BJS). (2018a). "Correctional Populations in the United States, 2016." Retrieved from <https://www.bjs.gov/content/pub/pdf/cpus16.pdf>.
- Bureau of Justice Statistics (BJS). (2018b). "Probation and Parole in the United States, 2016." Retrieved from <https://www.bjs.gov/content/pub/pdf/ppus16.pdf>.
- Burke, P. J., & Cast, A. D. (1997). Stability and change in the gender identities of newly married couples. *Social Psychology Quarterly*, 277-290.
- Cable, D. M. & Welbourne, T. M. (1994). *Organizational change and the identity cycle: Understanding the effect of change on individual attitudes and behaviors through a combined social identity theory/identity theory perspective* (CAHRS Working Paper #94-01). Ithaca, NY: Cornell University, School of Industrial and Labor Relations, Center for Advanced Human Resource Studies. Retrieved from <http://digitalcommons.ilr.cornell.edu/cahrswp/226>.
- Carels, R. A., Hinman, N., Koball, A., Oehlhof, M. W., Gumble, A., & Young, K. M. (2011). The self-protective nature of implicit identity and its relationship to weight bias and short-term weight loss. *Obesity facts*, 4(4), 278-283.
- Chamberlain, A. W., Gricius, M., Wallace, D. M., Borjas, D., & Ware, V. M. (2017). Parolee–Parole Officer Rapport: Does It Impact Recidivism?. *International Journal of Offender Therapy and Comparative Criminology*, 62(11), 3581-3602.
- Christian, J. (2005). Riding the bus: Barriers to prison visitation and family management strategies. *Journal of Contemporary Criminal Justice*, 21(1), 31–48.
- Christian, J., Mellow, J., & Thomas, S. (2006). Social and economic implications of family connections to prisoners. *Journal of Criminal Justice*, 34(4), 443-452.
- Cialdini, R. B., Brown, S. L., Lewis, B. P., Luce, C., & Neuberg, S. L. (1997). Reinterpreting the empathy–altruism relationship: When one into one equals oneness. *Journal of personality and social psychology*, 73(3), 481-494.
- Clark, M. S., & Mills, J. (1979). Interpersonal attraction in exchange and communal relationships. *Journal of personality and social psychology*, 37(1), 12-24.
- Coats, S., Smith, E. R., Claypool, H. M., & Banner, M. J. (2000). Overlapping mental representations of self and in-group: Reaction time evidence and its relationship with explicit measures of group identification. *Journal of Experimental Social Psychology*, 36(3), 304-315.

- Comfort, M. L. (2003). In the tube at San Quentin: The “secondary prisonization” of women visiting inmates. *Journal of Contemporary Ethnography*, 32(1), 77-107.
- \_\_\_\_\_. (2007). Punishment beyond the legal offender. *Annual Review of Law and Social Science*, 3, 271-296.
- Courtright, K. E., & Mackey, D. A. (2004). Job desirability among criminal justice majors: Exploring relationships between personal characteristics and occupational attractiveness. *Journal of Criminal Justice Education*, 15(2), 311-326.
- Courtright, K. E., Mackey, D. A., & Packard, S. H. (2005). Empathy among college students and criminal justice majors: Identifying predispositional traits and the role of education. *Journal of Criminal Justice Education*, 16(1), 125-144.
- Dallaire, D. H. (2007). Incarcerated mothers and fathers: A comparison of risks for children and families. *Family relations*, 56(5), 440-453.
- Dasgupta, N., & Greenwald, A. G. (2001). On the malleability of automatic attitudes: Combating automatic prejudice with images of admired and disliked individuals. *Journal of Personality and Social Psychology*, 81, 800-814.
- Dasgupta, N., & Rivera, L. M. (2006). From automatic sexual prejudice to behavior: The moderating role of traditional beliefs about gender, gender identity, and behavioral vigilance. *Journal of Personality and Social Psychology*, 91, 268-280.
- DeMichele, M. T. (2007). Probation and parole’s growing caseloads and workload allocation: Strategies for managerial decision making. *The American Probation & Parole Association*.
- Deutsch, F. M., & Mackesy, M. E. (1985). Friendship and the development of self-schemas: The effects of talking about others. *Personality and Social Psychology Bulletin*, 11(4), 399-408.
- Devos, T., & Banaji, M. R. (2003). Implicit self and identity. *Annals of the New York Academy of Sciences*, 1001, 177-211.
- Devos, T., Viera, E., Diaz, P., & Dunn, R. (2007). Influence of motherhood on the implicit academic self-concept of female college students: Distinct effects of subtle exposure to cues and directed thinking. *European Journal of Psychology of Education*, 22(3), 371
- Dovidio, J. F., Allen, J. L., & Schroeder, D. A. (1990). Specificity of empathy-induced helping: Evidence for altruistic motivation. *Journal of Personality and Social Psychology*, 59(2), 249-260.

- Dowden, C., & Andrews, D. A. (2004). The importance of staff practice in delivering effective correctional treatment: A meta-analytic review of core correctional practice. *International Journal of Offender Therapy and comparative criminology*, 48(2), 203-214.
- Do-Yeong, K. (2003). Voluntary controllability of the implicit association test (IAT). *Social Psychology Quarterly*, 66(1), 83-96.
- Ebaugh, H. R., & Ebaugh, H. R. F. (1988). *Becoming an ex: The process of role exit*. University of Chicago Press.
- Egloff, B., & Schmukle, S. C. (2002). Predictive validity of an implicit association test for assessing anxiety. *Journal of personality and social psychology*, 83(6), 1441-1455.
- Ellemers, N., & Rink, F. (2005). Identity in work groups: The beneficial and detrimental consequences of multiple identities and group norms for collaboration and group performance. In *Social identification in groups* (pp. 1-41). Emerald Group Publishing Limited.
- Ellemers, N., Spears, R., & Doosje, B. (2002). Self and social identity. *Annual Review of Psychology*, 53, 161-186.
- Fairchild, H. H., & Cozens, J. A. (1981). Chicano, Hispanic, or Mexican American: What's in a name?. *Hispanic Journal of Behavioral Sciences*, 3(2), 191-198.
- Falco, D. L., & Martin, J. S. (2012). Examining punitiveness: Assessing views toward the punishment of offenders among criminology and non-criminology students. *Journal of Criminal Justice Education*, 23(2), 205-232.
- Farnworth, M., Longmire, D. R., & West, V. M. (1998). College students' views on criminal justice. *Journal of Criminal Justice Education*, 9(1), 39-57.
- Farrall, S., & Maruna, S. (2004). Desistance-focused criminal justice policy research: Introduction to a special issue on desistance from crime and public policy. *The Howard Journal of Criminal Justice*, 43(4), 358-367.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.G. (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160.
- Feder, L., Jolin, A., & Feyerherm, W. (2000). Lessons from two randomized experiments in criminal justice settings. *Crime & Delinquency*, 46(3), 380-400.

- Feinstein, R. A. (2015). White privilege, juvenile justice, and criminal identities: a qualitative analysis of the perceptions and self-identification of incarcerated youth. *Contemporary Justice Review*, 18(3), 313-333.
- Finlay, K. A., & Stephan, W. G. (2000). Reducing prejudice: The effects of empathy on intergroup attitudes. *Journal of Applied Social Psychology*, 30(8), 1720-1737.
- Fishman LT. (1988). Stigmatization and prisoners' wives' feelings of shame. *Deviant Behavior*. 9:169-92.
- Fraley, B., & Aron, A. (2004). The effect of a shared humorous experience on closeness in initial encounters. *Personal Relationships*, 11(1), 61-78.
- Fulton, B., Stichman, A., Travis, L., & Latessa, E. (1997). Moderating probation and parole officer attitudes to achieve desired outcomes. *The Prison Journal*, 77(3), 295-312.
- Gainey, R. R., & Payne, B. K. (2003). Changing attitudes toward house arrest with electronic monitoring: The impact of a single presentation?. *International journal of offender therapy and comparative criminology*, 47(2), 196-209.
- Garcia, S. M., Weaver, K., Moskowitz, G. B., & Darley, J. M. (2002). Crowded minds: the implicit bystander effect. *Journal of personality and social psychology*, 83(4), 843-853.
- Gawronski, B., & Payne, B. K. (2010). *Handbook of implicit social cognition: Measurement, theory, and applications*. New York, NY: Guilford Press.
- Gibbons, S. G., & Rosecrance, J. D. (2005). *Probation, parole, and community corrections in the United States*. Boston, MA: Pearson Allyn & Bacon.
- Giordano, P. C., Cernkovich, S. A., & Rudolph, J. L. (2002). Gender, crime, and desistance: Toward a theory of cognitive transformation. *American journal of sociology*, 107(4), 990-1064.
- Giordano, P. C., Schroeder, R. D., & Cernkovich, S. A. (2007). Emotions and crime over the life course: A neo-Meadian perspective on criminal continuity and change. *American Journal of Sociology*, 112(6), 1603-1661.
- Goffman, A. (2014). *On the Run: Fugitive Life in an American City*. Chicago, IL: University of Chicago Press.
- Goffman, E. (1963). *Stigma: Notes on the Management of Spoiled Identity*. New York, NY: Prentice Hall.

- Gonsalkorale, K., von Hippel, W., Sherman, J. W., & Klauer, K. C. (2009). Bias and regulation of bias in intergroup interactions: Implicit attitudes toward Muslims and interaction quality. *Journal of Experimental Social Psychology*, 45(1), 161-166.
- Gregg, A. P., & Sedikides, C. (2010). Narcissistic fragility: Rethinking its links to explicit and implicit self-esteem. *Self and Identity*, 9(2), 142-161.
- Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, beliefs, and stereotypes. *Psychological Review*, 102(1), 4-27.
- Greenwald, A. G., Banaji, M. R., Rudman, L. A., Farnham, S. D., Nosek, B. A., & Mellott, D. S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological review*, 109(1), 3.
- Greenwald, A. G., & Farnham, S. D. (2000). Using the Implicit Association Test to measure self-esteem and self-concept. *Journal of Personality and Social Psychology*, 79, 1022-1038
- Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: the implicit association test. *Journal of personality and social psychology*, 74(6), 1464.
- Greenwald, A. G., & Nosek, B.A. (2008). Attitudinal dissociation: What does it mean? In Petty, R. E., Fazio, R. H., & Briñol, P. (Eds.), *Attitudes: Insights from the new implicit measures* (Pp. 65–82). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the implicit association test: I. An improved scoring algorithm. *Journal of personality and social psychology*, 85(2), 197-216.
- Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009a). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality And Social Psychology*, 97,17-41.
- Greenwald, A. G., Smith, C. T., Sriram, N., Bar-Anan, Y., & Nosek, B. A. (2009b). Implicit race attitudes predicted vote in the 2008 US presidential election. *Analyses of Social Issues and Public Policy*, 9(1), 241-253
- Gschwendner, T., Hofmann, W., & Schmitt, M. (2008). Convergent and predictive validity of implicit and explicit anxiety measures as a function of specificity similarity and content similarity. *European Journal of Psychological Assessment*, 24(4), 254-262.



- Gunnison, E., & Helfgott, J. B. (2011). Factors that hinder offender reentry success: A view from community corrections officers. *International Journal of Offender Therapy and Comparative Criminology*, 55(2), 287-304.
- Haines, E. L., & Kray, L. J. (2005). Self-power associations: the possession of power impacts women's self-concepts. *European Journal of Social Psychology*, 35(5), 643-662.
- Hensley, C., Miller, A., Koscheski, M., & Tewksbury, R. (2003). Student attitudes toward inmate privileges. *American journal of Criminal justice*, 27(2), 249-262.
- Hoffner, C. A., Lee, S., & Park, S. J. (2016). "I miss my mobile phone!": Self-expansion via mobile phone and responses to phone loss. *New Media & Society*, 18(11), 2452-2468.
- Hofmann, W., Gawronski, B., Gschwendner, T., Le, H., & Schmitt, M. (2005). A meta-analysis on the correlation between the Implicit Association Test and explicit self-report measures. *Personality and Social Psychology Bulletin*, 31(10), 1369-1385.
- Hogg, M. A., & Turner, J. C. (1987). Intergroup behaviour, self-stereotyping and the salience of social categories. *British Journal of Social Psychology*, 26(4), 325-340.
- Home Office. (2007). "A rapid evidence assessment of the impact of mentoring on re-offending: A summary". Retrieved from <http://www.homeoffice.gov.uk/rd/pdfs07/rdsolr1107.pdf>.
- Jones, W. H., Couch, L., & Scott, S. (1997). Trust and betrayal: The psychology of getting along and getting ahead. In R. Hagan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 465-482). San Diego, CA: Academic Press.
- Ireland, C., & Berg, B. (2007). Women in parole: Gendered adaptations of female parole agents in California. *Women & Criminal Justice*, 18(1-2), 131-150.
- Jones, E. E. (1990). *Interpersonal perception*. New York, NY: Freeman.
- Jurik, N. C. (1985). Individual and organizational determinants of correctional officer attitudes toward inmates. *Criminology*, 23(3), 523-540.
- Karpinski, A., & Steinman, R. B. (2006). The single category implicit association test (SC-IAT) as a measure of implicit social cognition. *Journal of Personality and Social Psychology*, 91, 16-32.
- Kurdi, B., Seitchik, A. E., Axt, J. R., Carroll, T. J., Karapetyan, A., Kaushik, N., Tomezsko, D., Greenwald, A. G., & Banaji, M. R. (2018, December 13).

Relationship Between the Implicit Association Test and Intergroup Behavior: A Meta-Analysis. *American Psychologist*. Advance online publication.

- Lambert, E., & Clarke, A. (2004). Crime, capital punishment, and knowledge: are criminal justice majors better informed than other majors about crime and capital punishment?. *The Social Science Journal*, 41(1), 53-66.
- Landenberger, N. A., & Lipsey, M. W. (2005). The positive effects of cognitive-behavioral programs for offenders: A meta-analysis of factors associated with effective treatment. *Journal of experimental criminology*, 1(4), 451-476.
- Lane, J. S. (1997). Can you make a horse drink? The effects of a corrections course on attitudes toward criminal punishment. *Crime & Delinquency*, 43(2), 186-202.
- Laub, J.H., & Sampson, R. J. (2003). *Shared Beginnings, Divergent Lives*, London: Harvard University Press.
- Lee, S., Rogge, R. D., & Reis, H. T. (2010). Assessing the seeds of relationship decay: Using implicit evaluations to detect the early stages of disillusionment. *Psychological Science*, 21(6), 857-864.
- Lewis, K. R., Lewis, L. S., & Garby, T. M. (2013). Surviving the trenches: The personal impact of the job on probation officers. *American Journal of Criminal Justice*, 38(1), 67-84.
- Lipsey, M.W., & Derzon, J.H. (1998). Predictors of violent or serious delinquency in adolescence and early adulthood. In R. Loeber and D.P. Farrington (Eds.), *A synthesis of longitudinal research. In Serious and Violent Juvenile Offenders: Risk Factors and Successful Interventions* (pp.86–105). Oaks, CA: Sage Publications.
- Little, M. (1990). *Young Men in Prison: The criminal identity explored through the rules of behaviour*. Hants, UK: Dartmouth.
- Lopoo, L. M., & Western, B. (2005). Incarceration and the formation and stability of marital unions. *Journal of Marriage and Family*, 67(3), 721-734.
- Luhtanen, R., & Crocker, J. (1992). A collective self-esteem scale: Self-evaluation of one's social identity. *Personality and social psychology bulletin*, 18(3), 302-318.
- Mackey, D. A., & Courtright, K. E. (2000). Assessing punitiveness among college students: A comparison of criminal justice majors with other majors. *Criminal Justice Studies*, 12(4), 423-441.
- Maruna, S. (2001) *Making Good: How Ex-convicts Reform and Rebuild Their Lives*, Washington, DC.: American Psychological Association.

- Maruna, S. (2004). Desistance from crime and explanatory style: A new direction in the psychology of reform. *Journal of Contemporary Criminal Justice*, 20(2), 184-200.
- Maruna, S., & Roy, K. (2007). Amputation or reconstruction? Notes on the concept of “knifing off” and desistance from crime. *Journal of Contemporary Criminal Justice*, 23(1), 104-124.
- Martinez, D. J., & Christian, J. (2009). The familial relationships of former prisoners: Examining the link between residence and informal support mechanisms. *Journal of Contemporary Ethnography*, 38(2), 201-224.
- Mashek, D. J., Aron, A., & Boncimino, M. (2003). Confusions of self with close others. *Personality and Social Psychology Bulletin*, 29(3), 382-392.
- Mattingly, B. A., & Lewandowski, Jr, G. W. (2013). The power of one: Benefits of individual self-expansion. *The Journal of Positive Psychology*, 8(1), 12-22.
- Mattingly, B. A., & Lewandowski Jr, G. W. (2014a). Expanding the self brick by brick: Nonrelational self-expansion and self-concept size. *Social Psychological and Personality Science*, 5(4), 484-490.
- Mattingly, B. A., & Lewandowski Jr, G. W. (2014b). Broadening horizons: Self-expansion in relational and non-relational contexts. *Social and Personality Psychology Compass*, 8(1), 30-40.
- Mattingly, B. A., Lewandowski Jr, G. W., & McIntyre, K. P. (2014). “You make me a better/worse person”: A two-dimensional model of relationship self-change. *Personal Relationships*, 21(1), 176-190.
- McCambridge, J., Day, M., Thomas, B. A., & Strang, J. (2011). Fidelity to motivational interviewing and subsequent cannabis cessation among adolescents. *Addictive behaviors*, 36(7), 749-754.
- McIntyre, K. P., Mattingly, B. A., Lewandowski Jr, G. W., & Simpson, A. (2014). Workplace self-expansion: Implications for job satisfaction, commitment, self-concept clarity, and self-esteem among the employed and unemployed. *Basic and Applied Social Psychology*, 36(1), 59-69.
- McLaughlin-Volpe, T., & Wright, S. C. (2002, July). The hidden rewards of cross-group friendships: Self-expansion across group membership. In R. González & A. Voci (Chairs), *Intergroup contact and prejudice reduction: Current development in theory and research*. Paper presented at the 13th General Meeting of the European Association of Experimental Social Psychology, San Sebastián, Spain.
- McMurran, M. (2009). Motivational interviewing with offenders: A systematic

- review. *Legal and Criminological Psychology*, 14(1), 83-100.
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of vocational behavior*, 61(1), 20-52.
- Mitchell, J. P., Nosek, B. A., & Banaji, M. R. (2003). Contextual variations in implicit evaluation. *Journal of Experimental Psychology: General*, 132(3), 455.
- Moorman, R. H., & Podsakoff, P. M. (1992). A meta-analytic review and empirical test of the potential confounding effects of social desirability response sets in organizational behaviour research. *Journal of Occupational and Organizational Psychology*, 65(2), 131-149.
- Morash, M., Kashy, D. A., Smith, S. W., & Cobbina, J. E. (2014). The effects of probation or parole agent relationship style and women offenders' criminogenic needs on offenders' responses to supervision interactions. *Criminal Justice and Behavior*, 42(4), 412-434.
- Murphy, C. M., & Baxter, V. A. (1997). Motivating batterers to change in the treatment context. *Journal of Interpersonal Violence*, 12(4), 607-619.
- Naser, R. L., & Visser, C. A. (2006). Family Members' Experiences with Incarceration and Reentry. *Western Criminology Review*, 7(2) 20-31.
- National Research Council. (2008). "Parole, Desistance from Crime, and Community Integration." <https://www.nap.edu/catalog/11988/parole-desistance-from-crime-and-community-integration>.
- Nisbett R., & Ross, L. (1980). *Human Inference: Strategies and Shortcomings of Social Judgement*. Englewood Cliff, NJ: Prentice Hall.
- Nock, M. K., Park, J. M., Finn, C. T., Deliberto, T. L., Dour, H. J., & Banaji, M. R. (2010). Measuring the suicidal mind: Implicit cognition predicts suicidal behavior. *Psychological Science*, 21, 511-517.
- Nosek, B. A., & Banaji, M. R. (2001). The go/no-go association task. *Social cognition*, 19(6), 625-666.
- Nosek, B. A., Banaji, M. R., & Greenwald, A. G. (2002). Math= male, me= female, therefore math≠ me. *Journal of personality and social psychology*, 83(1), 44-49.
- Nosek, B. A., Hawkins, C. B., & Frazier, R. S. (2011). Implicit social cognition: From measures to mechanisms. *Trends in Cognitive Sciences*, 15, 152-159.

- Nosek, B. A., & Smyth, F. L. (2007). A multitrait-multimethod validation of the implicit association test. *Experimental psychology*, 54(1), 14-29.
- Oakes, P. J. (1987). The salience of social categories. In J. C. Turner, M. A. Hogg, P. J. Oakes, S. D. Reicher & M. S. Wetherell, *Rediscovering the social group: A self-categorization theory* (pp. 117-141). New York, NY: Basil Blackwell.
- Oyserman, D., Elmore, K., & Smith, G. (2012). Self, self-concept, and identity. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 69-104). New York, NY: The Guilford Press.
- Page-Gould, E. (2012). To whom can I turn? Maintenance of positive intergroup relations in the face of intergroup conflict. *Social Psychological and Personality Science*, 3(4), 462-470.
- Page-Gould, E., Mendoza-Denton, R., Alegre, J. M., & Siy, J. O. (2010a). Understanding the effects of cross-group friendship on interactions with novel outgroup members. *Journal of personality and social psychology*, 98(5), 775-793.
- Page-Gould, E., Mendes, W. B., & Major, B. (2010b). Intergroup contact facilitates physiological recovery following stressful intergroup interactions. *Journal of experimental social psychology*, 46(5), 854-858.
- Page-Gould, E., Mendoza-Denton, R., & Tropp, L. R. (2008). With a little help from my cross-group friend: Reducing anxiety in intergroup contexts through cross-group friendship. *Journal of personality and social psychology*, 95(5), 1080-1094.
- Payne, B. K., & Riedel Jr, R. (2002). Gun control attitudes and the criminal justice student: Do differences exist?. *College Student Journal*, 36(2), 314-323.
- Perugini, M., & Leone, L. (2009). Implicit self-concept and moral action. *Journal of Research in Personality*, 43(5), 747-754.
- Petersilia, J. (2003). *When Prisoners come home: Parole and prisoner Reentry*. New York: Oxford University Press.
- Pew Research Center for the People and the Press . (2008). "Collateral Costs: Incarceration's Effect on Economic Mobility." Retrieved from [https://www.pewtrusts.org/~media/legacy/uploadedfiles/pes\\_assets/2010/CollateralCosts1pdf.pdf](https://www.pewtrusts.org/~media/legacy/uploadedfiles/pes_assets/2010/CollateralCosts1pdf.pdf).
- Phillips, S. D., & Gates, T. (2011). A conceptual framework for understanding the stigmatization of children of incarcerated parents. *Journal of Child and Family Studies*, 20(3), 286-294.

- Ross, E. C., Polaschek, D. L., & Ward, T. (2008). The therapeutic alliance: A theoretical revision for offender rehabilitation. *Aggression and Violent Behavior, 13*(6), 462-480.
- Richetin, J., Richardson, D. S., & Mason, G. D. (2010). Predictive validity of IAT aggressiveness in the context of provocation. *Social Psychology, 41*(1), 27-34.
- Rivera, L. M., & Veysey, B. M. (2014). Criminal justice system involvement and gender stereotypes: Consequences and implications for women's implicit and explicit criminal identities. *Alb. L. Rev.*, 78, 1109-1126.
- Rivera, L. M., & Veysey, B. M. (2018). Implicit self-criminal cognition and its relation to criminal behavior. *Law and human behavior, 42*(6), 507-519.
- Rooth, D. O. (2010). Automatic associations and discrimination in hiring: Real world evidence. *Labour Economics, 17*(3), 523-534
- Rosen, P. J., Milich, R., & Harris, M. J. (2007). Victims of their own cognitions: Implicit social cognitions, emotional distress, and peer victimization. *Journal of Applied Developmental Psychology, 28*(3), 211-226.
- Ross, E. C., Polaschek, D. L., & Ward, T. (2008). The therapeutic alliance: A theoretical revision for offender rehabilitation. *Aggression and Violent Behavior, 13*(6), 462-480.
- Rudman, L. A., & Phelan, J. E. (2010). The effect of priming gender roles on women's implicit gender beliefs and career aspirations. *Social Psychology, 41*(3), 192-202.
- Sampson, R. J. & Laub, J. H. (2005). A life-course view of the development of crime. *Annals of the American Academy of Political and Social Science, 602*, 12-45.
- Sampson, R. J., & Laub, J. H. (1993). *Crime in the Making: Pathways and Turning Points through Life*, London: Harvard University Press.
- Schnabel, K., & Asendorpf, J.B. (2010). The self-concept: New insights from implicit measurement procedures. In B. Gawronski & B.K. Payne (Eds.) *Handbook of implicit social cognition: Measurement, theory, and applications* (pp. 408-425). New York: Guilford Press.
- Schröder-Abé, M., Rudolph, A., & Schütz, A. (2007). High implicit self-esteem is not necessarily advantageous: Discrepancies between explicit and implicit self-esteem and their relationship with anger expression and psychological health. *European Journal of Personality: Published for the European Association of Personality Psychology, 21*(3), 319-339.

- Seiter, R. P. (2002). Prisoner reentry and the role of parole officers. *Federal Probation*, 66(3), 50-54.
- Seiter, R. P., & West, A. D. (2003). Supervision styles in probation and parole: An analysis of activities. *Journal of Offender Rehabilitation*, 38(2), 57-75.
- Selke, W. L. (1980). The impact of higher education on crime orientations. *Journal of Criminal Justice*, 8(3), 175-184.
- Sellers, R.M., Rowley, S.A.J., Chavous, T.M., Shelton, J.N., & Smith, M.A. (1997). Multidimensional inventory of Black identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology*, 73, 805-815.
- Shedlosky-Shoemaker, R., Costabile, K. A., & Arkin, R. M. (2014). Self-expansion through fictional characters. *Self and Identity*, 13(5), 556-578.
- Sigler, R. T., & McGraw, B. (1984). Adult probation and parole officers: Influence of their weapons, role perceptions and role conflict. *Criminal Justice Review*, 9(1), 28-32.
- Sinclair, S., & Huntsinger, J. (2006). The interpersonal basis of self-stereotyping. In S. Levin & C. van Laar (Eds.), *Stigma and group inequality: Social psychological perspectives. The Claremont Symposium on Applied Social Psychology* (pp. 235–259). Mahwah, NJ: Erlbaum.
- Slotter, E. B., & Gardner, W. L. (2009). Where do you end and I begin? Evidence for anticipatory, motivated self–other integration between relationship partners. *Journal of Personality and Social Psychology*, 96(6), 1137.
- \_\_\_\_\_. (2012). How needing you changes me: The influence of attachment anxiety on self-concept malleability in romantic relationships. *Self and Identity*, 11(3), 386-408.
- Smith, E. R., Coats, S., & Walling, D. (1999). Overlapping mental representations of self, in-group, and partner: Further response time evidence and a connectionist model. *Personality and Social Psychology Bulletin*, 25(7), 873-882.
- Steffens, M. C., Jelenec, P., & Noack, P. (2010). On the leaky math pipeline: Comparing implicit math-gender stereotypes and math withdrawal in female and male children and adolescents. *Journal of Educational Psychology*, 102(4), 947-963.
- Stinchcomb, J. B. (2002). Prisons of the mind: Lessons learned from home confinement. *Journal of Criminal Justice Education*, 13(2), 463-478.

- Stone, R., Morash, M., Goodson, M., Smith, S., & Cobbina, J. (2016). Women on parole, identity processes, and primary desistance. *Feminist Criminology*, 13(4), 382-403.
- Stryker, S. (1968). Identity salience and role performance: The importance of symbolic interaction theory for family research. *Journal of Marriage and the Family*, 30, 558-564.
- \_\_\_\_\_. (1980). *Symbolic interactionism: A social structural version*. San Francisco, CA: Benjamin-Cummings Publishing Company.
- Stryker, S., & Burke, P. J. (2000). *The past, present and future of an identity theory*. *Social Psychology Quarterly*, 63 (4), 284–297.
- Sturge-Apple, M. L., Rogge, R. D., Peltz, J. S., Suor, J. H., & Skibo, M. A. (2015). Delving beyond conscious attitudes: Validation of an innovative tool for assessing parental implicit attitudes toward physical punishment. *Infant and child development*, 24(3), 240-255.
- Sutherland, E.H. 1947. *Principles of Criminology*. Fourth Edition. Philadelphia: Lippincott.
- Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations*. Monterey, CA: Brooks/Cole.
- \_\_\_\_\_. (1986). The social identity theory of inter group behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations*. Chicago, IL: Nelson.
- Taxman, F. S. (2002). Supervision-exploring the dimensions of effectiveness. *Fed. Probation*, 66(2), 14-27.
- Taxman, F. S., & Ainsworth, S. (2009). Correctional milieu: The key to quality outcomes. *Victims and Offenders*, 4(4), 334-340.
- Teachman, B. A. (2007). Evaluating implicit spider fear associations using the Go/No-go Association Task. *Journal of Behavior Therapy and Experimental Psychiatry*, 38(2), 156-167.
- Teige-Mocigemba S, Klauer KC, Sherman JW. (2010). A practical guide to implicit association tests and related tasks. In *Handbook of Implicit Social Cognition: Measurement, Theory, and Applications*. In B. Gawronski & B.K. Payne (Eds.), *Handbook of implicit social cognition: Measurement, theory, and applications* (pp. 117–39). New York: Guilford Press.



- Tesser, A., Millar, M., & Moore, J. (1988). Some affective consequences of social comparison and reflection processes: The pain and pleasure of being close. *Journal of personality and social psychology*, 54(1), 49-61.
- The Sentencing Project. (2009). "Incarcerated Parents and their Children. Trends 1991-2007." Retrieved from <https://www.sentencingproject.org/wp-content/uploads/2016/01/Incarcerated-Parents-and-Their-Children-Trends-1991-2007.pdf>.
- Trawalter, S., Richeson, J. A., & Shelton, J. N. (2009). Predicting behavior during interracial interactions: A stress and coping approach. *Personality and Social Psychology Review*, 13(4), 243-268.
- Tsoudis, O. (2000). Does majoring in criminal justice affect perceptions of criminal justice. *Journal of Criminal Justice Education*, 11(2), 225-236.
- Turner, J. C. (1975). Social comparison and social identity: Some prospects for intergroup behaviour. *European Journal of Social Psychology*, 5(1), 1-34.
- \_\_\_\_\_. (1985). Social categorization and the self-concept: A social cognitive theory of group behavior. In *Advances in Group Processes: Theory and Research*, ed. E.J. Lawler, 2:7-122. Greenwich, CT: JAI Press.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. New York: Basil Blackwell.
- Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin*, 20(5), 454-463.
- Uhlmann, E., & Swanson, J. (2004). Exposure to violent video games increases automatic aggressiveness. *Journal of adolescence*, 27(1), 41-52.
- VanderDrift, L. E., Lewandowski Jr, G. W., & Agnew, C. R. (2011). Reduced self-expansion in current romance and interest in relationship alternatives. *Journal of Social and Personal Relationships*, 28(3), 356-373.
- Van Knippenberg, D., & Sleebos, E. (2006). Organizational identification versus organizational commitment: self-definition, social exchange, and job attitudes. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 27(5), 571-584.

- Veysey, B. M., & Rivera, L. M. (2017). Implicit criminal identity and age: Implications for criminal persistence and desistance. *Criminal Justice and Behavior*, 44(10), 1249-1261.
- Walters, G. D. (2003). Changes in criminal thinking and identity in novice and experienced inmates: Prisonization revisited. *Criminal Justice and Behavior*, 30(4), 399-421.
- Walters, S. T., Clark, M. D., Gingerich, R., & Meltzer, M. L. (2007). *Motivating offenders to change: A guide for probation and parole*. Washington, DC: US Department of Justice, National Institute of Corrections.
- Waugh, C. E., & Fredrickson, B. L. (2006). Nice to know you: Positive emotions, self-other overlap, and complex understanding in the formation of a new relationship. *The Journal of Positive Psychology*, 1(2), 93-106.
- Wegner, D.M. (1980). The self in prosocial action. In D.M. Wegner & R.R. Vallacher (Eds.). *The self in social psychology* (pp. 131-157). New York, NY: Oxford University Press.
- Wolfer, L., & Friedrichs, D. O. (2001). A commitment to justice at a Jesuit university: A comparison of criminal justice majors to non-majors. *Journal of Criminal Justice Education*, 12(2), 319-336.
- Xu, X., Floyd, A. H., Westmaas, J. L., & Aron, A. (2010). Self-expansion and smoking abstinence. *Addictive Behaviors*, 35(4), 295-301.
- Xu, X., Leahey, T. M., Boguszewski, K., Krupel, K., Mailloux, K. A., & Wing, R. R. (2016). Self-expansion is associated with better adherence and obesity treatment outcomes in adults. *Annals of Behavioral Medicine*, 51(1), 13-17.

## Footnotes

<sup>1</sup>One participant did not indicate their gender.

<sup>2</sup>The main analyses were also conducted while controlling for past criminal experiences of parole officers. The results remained the same such that Hypothesis 3 was supported but there was no support for Hypotheses 11 and 12. Moreover, analyses for Hypotheses 11 and 12 revealed a significant main effect of the manipulation. This suggests that regardless of past criminal experiences, salient memories are more powerful in guiding cognitions of parole officers.

<sup>3</sup>Exploratory analyses were conducted while controlling for past criminal experience. The results remained the same such that the main effect of the manipulation was significant in all analyses, but there was no significant main effect of subject group identification or parole officer orientation, and there was no significant interaction.

<sup>4</sup>The main analyses were conducted using the subsample of participants who had criminal experiences ( $n=15$ ). Although not significant, the results for Hypothesis 3 were in the same direction as with the full sample and subsample of participants without criminal experiences. The analyses for Hypotheses 11 and 12, revealed that although the main effect of the manipulation was not significant, the effect of the manipulation remained in the same direction. This suggests that reminders of past experiences can potentially be more powerful than past personal criminal experiences in influencing the cognitions of parole officers.

<sup>5</sup> Because the stimuli of the implicit famous criminal-self IAT represented Black individuals, analyses were conducted to explore the interaction between race and major. To explore the interaction between race and major, implicit famous criminal-self association scores were subjected to a two-way ANOVA in which major and participants' racial-ethnic identification (1 = Black/African American and 0 = non-Black/ African American) were the independent variables. The ANOVA yielded a significant main effect of major,  $F(1, 88) = 8.49, p = .005$ . In line with the hypothesis testing for Hypothesis 14 (main effect of implicit famous criminal-self associations), criminal justice majors ( $M = -.34, SD = .40$ ) exhibited weaker implicit famous criminal-self association strength in comparison to non-criminal justice majors ( $M = -.17, SD = .36$ ). There was a marginally significant interaction between racial-ethnic identification and major,  $F(1, 88) = 3.81, p = .054$ . Interestingly, this was not in the expected direction, such that non-Black/African American participants ( $M = -.25, SD = .38$ ) exhibited stronger implicit famous criminal-self associations in comparison to Black/African American participants ( $M = -.31, SD = .44$ ). The main effect of participants' racial-ethnic identity was not significant,  $F(1, 88) = .001, p = .972$ .

## Appendix A

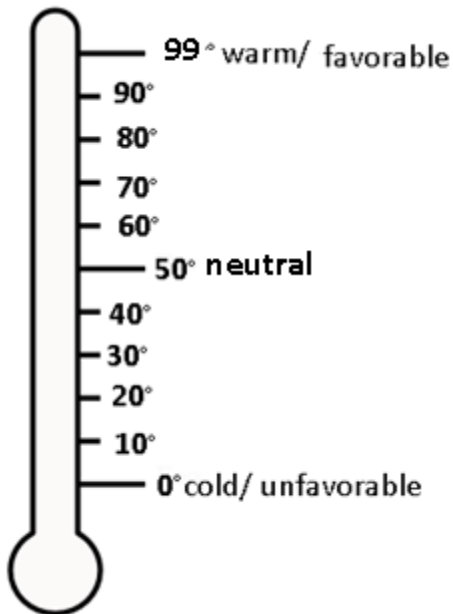
## Pretest Feeling Thermometer

The purpose of this survey is to indicate your feelings about well-known people for a future study.

Using the feeling thermometer on each page, please use the response space to indicate how you feel about the indicated individual. If you indicate a value between 0 and 49, this indicates that you feel cold, or unfavorable towards the individual. If you indicate a value of 50, this means that you have neutral feelings toward the individual. If you indicate a value between 51 and 99, this indicates that you feel warm, or favorable towards the individual.

There are no right or wrong answers. We are just interested in your personal beliefs and opinions. Try to answer each question as quickly as possible while trying to use the entire scale in your ratings.

Please skip individuals who you do not recognize. If you do not know the person, please check the box and do not enter a value in the response space.





Kevin Hart

\_\_\_\_\_  
Thermometer  
Temperature

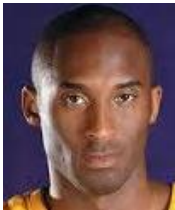
☐ I do not know this person



Zac Efron

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Kobe Bryant

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Shia Labeaouf

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Lil Wayne

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Chris Brown

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Usher

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Taylor Lautner

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Metta World Peace

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Rob Kardashian

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Jay-Z

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Lebron James

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Tiger Woods

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Justin Bieber

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Pharrell Williams

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Ryan Reynolds

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Jason Kidd

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Derrick Rose

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Adam Lavine

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Michael Vick

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



50 Cent

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



T.I.

\_\_\_\_\_  
Thermometer  
Temperature

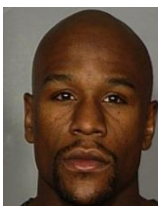
☐ I do not know this person



Robert Pattinson

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Floyd Mayweather

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person





Aaron Hernandez

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Channing Tatum

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Vanilla Ice

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Mark Wahlberg

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Reggie Bush

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Nelly

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Joshua Jackson

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Oscar Pistorius

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Drake

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Bobby Flay

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Michael Buble

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Bruno Mars

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Allen Iverson

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Michael Ealy

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Eminem

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



OJ Simpson

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Ryan Gosling

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



James Harden

\_\_\_\_\_  
Thermometer  
Temperature

☐ I do not know this person



Joe Giudice

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Jeffrey Dahmer

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Tim Howard

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Nick Cannon

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person



Osama BinLaden

\_\_\_\_\_

Thermometer  
Temperature

☐ I do not know this person

#### DEMOGRAPHIC INFORMATION

Gender: \_\_\_Male \_\_\_Female

Please check the box that best describes you.

- |                                                         |                                                             |
|---------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> American Indian/Alaskan Native | <input type="checkbox"/> White, not of Hispanic Origin      |
| <input type="checkbox"/> Asian or Pacific Islander      | <input type="checkbox"/> Multi-racial                       |
| <input type="checkbox"/> Black, not of Hispanic Origin  | <input type="checkbox"/> Another ethnicity not listed above |
| <input type="checkbox"/> Hispanic                       |                                                             |

## Appendix B

## Pretest Criminal Behavior

The purpose of this survey is to pretest your knowledge of well-known people for a future study.

Please use the scale to indicate how well you know the individual to be a criminal.

Please be as accurate as possible.

**Please skip individuals who you do not recognize. If you do not know the person, please check the box and do not circle a response on the scale.**



Joshua Jackson

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Lil Wayne

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Ryan Gossling

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



James Harden

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Joe Giudice

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Jeffrey Dahmer

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Tim Howard

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Nick Cannon

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Tiger Woods

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Justin Bieber

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



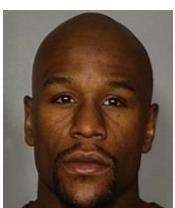
T.I.

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Robert Pattinson

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Floyd Mayweather

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



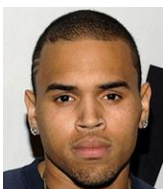
Aaron Hernandez

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Osama BinLaden

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Chris Brown

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person





Usher

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Pharrell Williams

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Ryan Reynolds

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Jason Kidd

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Derrick Rose

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Adam Lavine

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

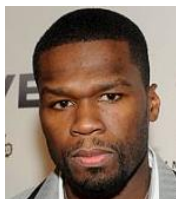
☐ I do not know this person





Michael Vick

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



50 Cent

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Taylor Lautner

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Metta World Peace

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Rob Kardashian

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Jay-Z

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Lebron James

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Channing Tatum

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Vanilla Ice

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Mark Wahlberg

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person

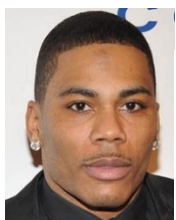


Reggie Bush

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Nelly

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Bobby Flay

- 0- I definitely know that this person is NOT a criminal
- 1- I think this person MAY be a criminal
- 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Bruno Mars

- 0- I definitely know that this person is NOT a criminal
- 1- I think this person MAY be a criminal
- 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Allen Iverson

- 0- I definitely know that this person is NOT a criminal
- 1- I think this person MAY be a criminal
- 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Michael Buble

- 0- I definitely know that this person is NOT a criminal
- 1- I think this person MAY be a criminal
- 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Michael Ealy

- 0- I definitely know that this person is NOT a criminal
- 1- I think this person MAY be a criminal
- 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



Eminem

- 0- I definitely know that this person is NOT a criminal
- 1- I think this person MAY be a criminal
- 2- I definitely know that this person IS a criminal

---

☐ I do not know this person



OJ Simpson

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Oscar Pistorius

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Drake

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



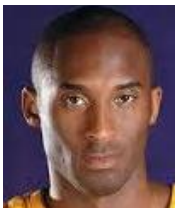
Kevin Hart

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Zac Efron

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



Kobe Bryant

- 0- I definitely know that this person is NOT a criminal  
 1- I think this person MAY be a criminal  
 2- I definitely know that this person IS a criminal
- 
- ☐ I do not know this person



**Shia Labeaouf**

0- I definitely know that this person is NOT a criminal

1- I think this person MAY be a criminal

2- I definitely know that this person IS a criminal

---

☐ I do not know this person

#### DEMOGRAPHIC INFORMATION

Gender: \_\_\_Male \_\_\_Female

Please check the box that best describes you.

___American Indian/Alaskan Native	___White, not of Hispanic Origin
___Asian or Pacific Islander	___Multi-racial
___Black, not of Hispanic Origin	___Another ethnicity not listed above
___Hispanic	