Eastern Kentucky University
Encompass

Online Theses and Dissertations | Student Scholarship

January 2012

The Moderating Effects of Need for Closure on the Common Ingroup Identity Model

Bradlee Wayne Gamblin
Eastern Kentucky University

Follow this and additional works at: https://encompass.eku.edu/etd

 Part of the Personality and Social Contexts Commons

Recommended Citation
Gamblin, Bradlee Wayne, "The Moderating Effects of Need for Closure on the Common Ingroup Identity Model" (2012). *Online Theses and Dissertations*. 126.
https://encompass.eku.edu/etd/126

This Open Access Thesis is brought to you for free and open access by the Student Scholarship at Encompass. It has been accepted for inclusion in Online Theses and Dissertations by an authorized administrator of Encompass. For more information, please contact Linda.Sizemore@eku.edu.

THE MODERATING EFFECTS OF NEED FOR CLOSURE ON THE COMMON INGROUP IDENTITY MODEL

By

Bradlee W. Gamblin

Thesis Approved:

Chair, Advisory Committee

Member, Advisory Committee

Member, Advisory Committee

Dean, Graduate School

STATEMENT OF PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for a Master of Science degree at Eastern Kentucky University, I agree that the Library shall make it available to borrowers under rules of the Library. Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of the source is made. Permission for extensive quotation from or reproduction of this thesis may be granted by my major professor, or in [his/her] absence, by the Head of Interlibrary Services when, in the opinion of either, the proposed use of the material is for scholarly purposes. Any copying or use of the material in this thesis for financial gain shall not be allowed without my written permission.

Signature 

Date 11/29/12

THE MODERATING EFFECTS OF NEED FOR CLOSURE ON THE COMMON INGROUP IDENTITY MODEL

By

Bradlee W. Gamblin

Bachelor of Science
Eastern Kentucky University
Richmond, Kentucky
2010

Submitted to the Faculty of the Graduate School of
Eastern Kentucky University
in partial fulfillment of the requirements
for the degree of
MASTER OF SCIENCE
December, 2012

Copyright © Bradlee W. Gamblin, 2012
All rights reserved

DEDICATION

This thesis is dedicated to my nephew
Cedric Ray Gamblin
for always making me smile.

ACKNOWLEDGMENTS

First, I must thank my advisor, Dr. Matthew Winslow, for keeping this thesis on track throughout its development and for his consistent advice and help along the way. I probably would never have finished this without him. I would also like to thank the other members of my committee, Dr. Jonathan Gore and Dr. Richard Osbaldiston, for their invaluable advice and assistance, especially in terms of the methodology. I should also thank Dr. Robert Mitchell, Ashley Pelletier, Benjamin Lindsay, Joni Hall, and Jamin Cundiff for their many insights, comments, and critiques that I would have otherwise overlooked. Finally, I would like to thank my family for their unconditional love and support.

ABSTRACT

The current study looked at the Common Ingroup Identity Model and its link to need for closure, a cognitive construct that causes individuals to seek out quick and finite answers. Based on previous research, I predicted that participants high in situational and dispositional need for closure would be more responsive to the Common Ingroup Identity Model than participants who were not. Results indicated that need for closure does not have a direct relationship with the model; however, a three-way interaction suggests that a more complex relationship may exist. These results give the Common Ingroup Identity Model more applicability within real-world situations. The findings also add to previous research on need for closure's relationship with prejudice reduction and suggest that its impact may be limited to techniques focused on intergroup contact.

TABLE OF CONTENTS

CHAPTER		PAGE
I.	Introduction	1
II.	Literature Review	2
	Prejudice, History, and Psychology	2
	Covert Racism and Other Prejudices	4
	Prejudice Reduction	6
	The Common Ingroup Identity Model	10
	Need for Closure	19
	Rationale	25
	Hypotheses	25
III.	Method	27
	Participants	27
	Materials	27
	Procedure	30
IV.	Results	37
	Dependent Measures	37
	Hypothesis Analysis	37
	Post-hoc Analyses	39
V.	Discussion	46
	Limitations	51
	Future Directions	54
	Conclusions	58
List of References		60
Appendices		71
	A. Need for Closure Scale	71
	B. Self-Esteem Scale	73
	C. Conscientiousness Scale	75
	D. Extraversion Scale	77
	E. Guilt Questionnaire	79

F. Big-Five Personality Test……... 81
G. Part One Consent Form……...85
H. Part One Debriefing Form…….. 87
I. Part Two Consent Form……..89
J. Newspaper Article, Ingroup Version……..91
K. Newspaper Article, Outgroup Version……... 93
L. Summary Sheet……...95
M. Demographics Sheet……... 97
N. Part Two Debriefing Form……..99
O. Online Consent Form……..101
P. Online Debriefing Form……..103
Q. In-Person Consent Form……..105
R. In-Person Debriefing Form……..107

LIST OF FIGURES

FIGURE PAGE

1. Ingroup X Time Pressure Effects on Guilt Scores for Low-NFC Participants…… 40

2. Ingroup X Time Pressure Effects on Guilt Scores for High-NFC Participants……40

3. Ingroup X Dispositional NFC Effects on Guilt Scores, Excluding Time Pressure…… 42

4. "Claudio Mendoza" (Athlete Used for Ingroup News Article)……. 92

5. "Claudio Mendoza" (Athlete Used for Outgroup News Article)…….. 94

LIST OF ABBREVIATIONS

Need for Closure…… NFC

Optimal Distinctiveness Theory…… ODT

Social Identity Theory…….SIT

CHAPTER I

INTRODUCTION

"Just then I noticed that almost all the people… were greeting each other, exchanging remarks and forming groups – behaving, in fact, as in a club where the company of others of one's own tastes and standing makes one feel at ease." – Albert Camus, *L'Etranger*

One of the main focuses of social psychology over its history is the study of prejudice. While prejudice research has focused primarily on identifying the different types of prejudices, as well as how and why prejudices form, a more applied area of prejudice research has developed which looks at ways to reduce prejudice. These prejudice reduction techniques look to combat, reduce, or change prejudice attitudes through psychological means. One of these techniques is the Common Ingroup Identity Model. Because of its focus on the role of categorization in the prejudice development, cognitive processes have been linked to this model's effectiveness. One cognitive process that has not been previously linked to the model is need for closure. The purpose of the current study is to look at the moderating effects of need for closure on the effectiveness of the Common Ingroup Identity Model.

CHAPTER II

LITERATURE REVIEW

Prejudice, History, and Psychology

The term *prejudice* refers to any preconceived, subjective judgment of a person or thing which, whether positive or negative, is not based on actual experiences (Allport, 1954). Although prejudices are formed prior to experience, they can persist after exposure to the prejudice group through different cognitive processes, such as skewed perception (Binning & Sherman, 2011) or memory bias (Corneille, Hugenberg, & Potter, 2007). Many different types of prejudices have been identified, including racism, sexism, ageism (Sigelman & Sigelman, 1982), classism, sexual prejudice, religious intolerance (Aosved, Long, & Voller, 2009), speciesism (Marcu, Lyons, & Hegarty, 2007), weightism (Blaine & McElroy, 2002), and ableism (Smith, Foley, & Chaney, 2008). Essentially, any possible categorical parsing of a social setting, which allows for one group to be compared to another group, can lead to prejudice.

Throughout history, these prejudices have played a major role in many significant events. Early examples of religious intolerance can be found in the Biblical persecution of the Jewish peoples by the Egyptians and Romans, the persecution of early Christians by the Romans (and the subsequent persecution of pagans by the then-christened Roman Empire), and the Christian Crusades. Racism was at the heart of the colonial strategies of many different empires, with racial superiority being one of the main arguments used to justify the maltreatment of indigenous peoples in the Americas, Africa, and Australasia.

Sexism, while less historically evident, can be seen covertly through laws regarding women across different civilizations as well as the 19th century trend of female writers (such as the Bronte sisters) to take pen names in order to have their works published. A more overt example of historical sexism can be found in the Salem witch trials of the late 17th century.

A historical look at psychology shows that prejudice, and more specifically sexism and racism, has been a popular topic of research (see Richards, 2010 for a review). Interestingly, it was the search for race and sex *differences* in psychology that eventually led researchers to the concepts of prejudice. In Psychology's infancy, differences between races and genders were assumed to be innate or based on the natural evolution of humanity. Therefore, early psychological research was focused on seeking out and identifying which areas different races performed differently on (or, more specifically, which areas white men performed better than other groups on). This is historically referred to as *scientific racism*. Some exemplars from the field of psychology who were heavily involved in early race difference research include Francis Galton and Gustav Le Bon. Sex differences in psychology follow the same general trend, with psychological differences applied to such physiological phenomenon as brain size, menstruation, and the inherent "need" of child-bearing (for example, Romanes, 1887; and Spencer, 1861).

Out of the search for group differences emerged the study of prejudice (Richards, 2010). The two driving forces behind this shift were cultural pressure and a lack of evidence of actual group differences. An emerging African-American and feminine voice in American and European society was strongly opposed to the assertion of white male

superiority by group difference researchers. At the same time, researchers were actually finding no group differences in such studies as the 1898 Cambridge Exposition (Costall, 1999) and Woodworth's 1910 examination of racial differences. These two factors led psychologists in the early 1930s to the beginnings of prejudice research: if group differences do not actually exist, then something else must be driving the perception that they do.

Covert Racism and Other Prejudices

Racism is a prejudice of one group of people by another based on the color of their skin. Racism is one of the most salient social categories that people use to group others, and has been the focus of extensive research in psychology, particularly in America (Richards, 2010). This is likely because, in the relatively short history of the United States, racism has been at the heart of several important events, such as the Trail of Tears, slavery, the Civil War, the Civil Rights movement, and (tangentially) the Holocaust. Whatever the reason, racism has remained a popular topic in psychology: an April 2012 search for the terms "race", "racism", or "racist" on PsycINFO yielded over 47,000 resulting publications.

One result of this research has been the identification of different forms that racism can be expressed through. *Old-fashioned* or *traditional* racism refers to blatant, directly racist attitudes and behaviors that characterize the stereotypically racist individual (Devine, Plant, & Buswell, 2000). All of the historical examples given above are typical of old-fashioned racism. Over time, old-fashioned racism has largely disappeared from public attitudes (Dovidio, Kawakami, & Gaertner, 2000), but, in its place, new, covert forms of racism have been found.

Symbolic racism (and the related concept, *modern* racism) refers to those racist attitudes and behaviors that are exhibited towards members of another race through indirect or symbolic manners (Kinder & Sears, 1981; McConahay, 1983). Symbolic racists typically exhibit their racist beliefs when an alternative, socially acceptable explanation of their behavior is available. Similarly, modern racists exhibit racist behaviors when there is ideological and situational ambiguity and race is not the focal point of the situation. Some examples of symbolic and modern racism include opposition to affirmative action and gay marriage, and the tendency for employers to favor applicants of the same race.

Another covert form of racism is *aversive* racism (Gaertner & Dovidio, 2005). Aversive racism refers to those forms of racism that are not driven by a hatred of people of a different race but instead are motivated by a discomfort or aversion with individuals from other races. Aversive racists typically express their beliefs unintentionally and honestly believe that they are not racist, sometimes even actively supporting racial equality. Aversive racism, like symbolic racism, is expressed when an alternative explanation is available, but unlike symbolic racism, aversive racism is theorized to be more prevalent in political liberals, not conservatives (Gaertner & Dovidio, 2000).

These covert types of racism have also been applied to other forms of prejudice. Along with their old-fashioned counterparts, researchers have found examples of aversive sexism (Ellemers & Barreto, 2009), aversive disablism (Deal, 2007), aversive weightism (Brochu, Gawronski, & Esses, 2011), modern sexism (Swim, Aikin, Hall, & Hunter, 1995), modern homonegativity (Morrison, Kenny, & Harrington, 2005), and modern intellectual disablism (Akrami, Ekehammar, Claesson, & Sonnander, 2006).

Prejudice Reduction

In response to these multiple forms of prejudice and the multiple ways that these prejudices can be expressed, psychologists began looking for ways to manipulate or reduce the levels of prejudice in prejudiced individuals, by either adjusting their attitudes toward or their beliefs about the group being prejudiced against. These manipulations are collectively referred to as prejudice reduction techniques.

One of the first to confront prejudice reduction was Gordon Allport. Although he addressed the issue earlier in relation to personality (Allport, 1945), it was his book, *The Nature of Prejudice* (Allport, 1954), which cemented his theory on prejudice reduction. In this book, Allport laid out his theory of prejudice, which focused on social and cultural influences on personality as well as the emergence of the "self" as a member of an ingroup. Allport also introduced what has become known as the *contact hypothesis*, his main theory of prejudice reduction. The contact hypothesis states that, under certain conditions, contact between an individual and an outgroup member can lead to reduced prejudice attitudes. Allport identified four contingencies of this contact that needed to be met for the contact to lead to prejudice reduction: equal status between groups, common goals, support from authority, and intergroup cooperation (Paluck & Green, 2009). Allport's contact hypothesis laid the foundation for virtually all prejudice reduction research that came afterwards, with different techniques emphasizing different facets of his theory.

Extensive support has been found in favor of Allport's contact hypothesis. Intergroup contact has been found to reduce prejudice towards a wide variety of groups, including immigrants (Escandell & Ceobanu, 2009), the Amish (McGuigan & Scholl,

2007), the elderly (Hale, 1998), political groups (Popan, Kenworthy, Frame, Lyons, & Snuggs, 2010), religious groups (Lloyd & Robinson, 2011), and homosexuals (Baunach, Burgess, & Muse, 2010). Support has also been found for the conditions of contact that Allport identified, though many studies tend to stress only one or two conditions. For example, Pettigrew & Tropp's (2006) meta-analysis found that studies following Allport's conditions of contact had significantly higher effect sizes than those studies that did not follow the conditions; they also concluded that support from authority was the most important condition. However, other researchers have shown evidence that intergroup cooperation (Molina & Wittig, 2006) can be the most important of Allport's conditions.

In recent years, some researchers have also expanded on the contact hypothesis. Pettigrew's (1998) Intergroup Contact Theory suggests adding the potentiality of friendship as a fifth condition of contact. Schiappa, Gregg, and Hewe's (2005) Parasocial Contact Hypothesis extends the definition of "contact" to include media consumption, such as television shows. Liu's (2010) Tri-Relational Contact Model states that contact is important for prejudice reduction not only between individuals but also between businesses and goods. While these three theories do expand upon Allport's original hypothesis, none of them abandon or even denigrate his ideas except to show the necessity of their particular additions. Additionally, the recency of these new theories is a testament to the long-standing impact of Allport's theory.

Other researchers have taken the contact hypothesis as a foundation and created their own techniques for reducing prejudice. Some of these techniques stand alone for their radical approaches, such as Huang, Sedlovskaya, Ackerman, and Bargh's (2011)

immunization technique and Olson and Fazio's (2006) conditioning procedure of reducing automatic racial prejudice. However, most of the prejudice reduction techniques that have followed from the contact hypothesis can be grouped into one of two approaches.

The first of these approaches could be labeled the *person-oriented* approach. Techniques that fall under this label seek to reduce or eliminate prejudice by attempting to change the prejudiced individual's attitudes or beliefs. Many person-oriented techniques rely on awareness interventions, where the prejudiced group is highlighted and attitudes are presumably changed through increased exposure and understanding of the group. For example, Johnson and Johnson's (2000) "Three C's" technique emphasizes increased knowledge of outgroups along with cooperation, conflict resolution, and civic values. Aboud and Levy (2000) discuss the benefits of bilingual, multicultural education and anti-racism programs. Other person-oriented techniques seek to evoke emotions in the prejudiced individual in an attempt to reduce prejudice. Some examples of this include the implementation of empathy (Stephan & Finlay, 1999) and hostile confrontation (Czopp, Monteith, & Mark, 2006) as prejudice reduction techniques.

While the person-oriented approach to prejudice reduction has been successful (for a brief review, see Paluck & Green, 2009), appealing to an individual's emotions or knowledge is not always effective. For example, Legault, Gutsell, and Inzlicht (2011) found that, when they were reminded of the societal pressures controlling prejudice beliefs, participants actually exhibited *more* prejudiced attitudes than those who experienced no intervention. Additionally, person-oriented approaches may not

adequately address the more covert types of prejudice. Individuals who exhibit some forms of covert prejudice, such as aversive racism, are not even aware that they have a prejudice. Therefore, prejudice reduction techniques that use intervention or emotion as a base may not be as effective.

The second broad approach that has been used in prejudice reduction research since Allport is the *social groups* approach. The social groups approach is focused largely around the interactions between an individual's ingroups, or groups that the individual is a member of, and the various outgroups (groups that the individual does not belong to) that the individual encounters. Ingroup research indicates that prejudices are formed, in part, because of perceived differences between one's ingroup and outgroups (Gaertner & Dovidio, 2000). These prejudices can form because of pro-ingroup biases (where the ingroup is viewed more positively than the outgroup), anti-outgroup biases (where the outgroup is viewed more negatively than the ingroup), or both (Brewer, 2007). The social groups approach to prejudice reduction attempts to manipulate these ingroup-outgroup biases, either through *decategorization* or *recategorization*.

Decategorization asks the individual to abandon their ingroups and outgroups altogether and instead judge others based on their individual merits (Gaertner & Dovidio, 2000). Techniques that focus on decategorization rely on small groups or one-on-one interdependent interactions, usually with the potentiality of friendship. Probably the most famous decategorization technique is the jigsaw classroom (Aronson, 2004). The jigsaw classroom forces the child to cooperate with others by breaking schoolwork into pieces and requiring them to work together in order to learn. The jigsaw creates an interdependent learning situation which encourages the child to ignore stereotypes,

establish friendships, and reduce their prejudice attitudes. Decategorization is a common technique for reducing prejudice (see, for example, Berryman-Fink, 2006; Fiske, 2000; and Miller, Brewer, & Edwards, 1985), and its utility in reducing prejudice against specific individuals of an outgroup is well-established.

However, these techniques become troublesome when decategorization is applied to an entire outgroup. Research has shown that interdependence and decategorization typically have a strong reduction effect on specific individuals from an outgroup, but that these individual effects do not generalize well to others from that individual's outgroup (Bratt, 2008; Miller et al., 1985). Because of this, decategorization alone is not the optimal approach to prejudice reduction when considering an outgroup as a whole.
In contrast to decategorization, which asks the individual to abandon groups altogether, recategorization asks the individual to recategorize themselves and outgroup members so that their original ingroup and outgroup become part of a new, more inclusive group (Gaertner & Dovidio, 2000).

The Common Ingroup Identity Model

The current study focuses on one of these social group reorganization techniques: the Common Ingroup Identity Model. However, before discussing the model itself, two theories of prejudice that the model is influenced by should be briefly mentioned.

Social Identity Theory

Tajfel and Turner's (1979) Social Identity Theory was one of the first major theories to directly follow from Allport's discussion of ingroup bias. Social Identity Theory (SIT) states that each individual has an identity that they create for themselves about their place in the social environment and that this social identity is based on a

summation of all the social categories that the individual belongs to. Because we all want to view ourselves in a positive light, SIT posits that people are motivated to create a positive social identity for themselves, and that this positive identity is formed through comparisons with outgroups.

SIT also makes a distinction between personal identity and what is termed the "collective identity" (Hirose, Taresawa, & Okuda, 2005; Hogg & Williams, 2000). Collective identity refers to the identity created by the individual that is concerned with the needs and goals of their ingroup as opposed to the needs and goals of the actual individual. By creating a collective identity, the individual identifies more closely with those individuals in the ingroup, causing differences within the group to be minimalized and similarities between the individual and outgroups to be highlighted (Gaertner & Dovidio, 2000). In tandem, these two processes lead to intergroup prejudice.

As an example of SIT's mechanisms at work, researchers have examined the role of nationalism in the evocation of a collective identity and the enhancement of prejudiced attitudes. In a study conducted in Germany, the presence of the German flag increased outgroup prejudice for participants who were highly nationalistic (Becker, Enders-Comberg, Wagner, Christ, & Butz, 2012). A separate study that examined anti-Semitism in Europe concluded that most anti-Semitic attitudes are based on a nationalistic view that Jewish people are a threat to the national self-image (Bergmann, 2008). These two studies exemplify the potential downside of the collective identity: when the individual is minimized and the group is accentuated, people who are not members of the group can become victims of prejudiced attitudes.

This collective identity can also be used as a weapon to combat prejudice. As previously stated, the collective identity causes individuals within a group to feel more similar than they actually are (Gaertner & Dovidio, 2000). This, in turn, causes prejudices against those who are not members of the group, as they are perceived as being more dissimilar than they actually are. However, a prejudice reduction technique that attempted to expand the original group to include individuals who were previously categorized as outgroup members could potentially circumvent the prejudice formation inherent in the collective identity.

Optimal Distinctiveness Theory

Brewer's (1991) Theory of Optimal Distinctiveness expands on research into SIT. Optimal Distinctiveness Theory (ODT) states that an individual forms their social identity through the contradictory psychological needs of *differentiation* and *assimilation*. In other words, an individual simultaneously wants to feel that they are unique and different as well as part of a positive and cohesive group. These two processes are hypothesized to lay on a continuum and that there is a point somewhere in the middle of the continuum where differentiation and assimilation are being optimally satisfied. This point is referred to as the *point of optimal distinctiveness* and it is most easily satisfied by membership in groups of intermediate size because they allow the individual to feel as if they are part of a group but that their personal impact can still be felt.

Optimal distinctiveness can also be a cause of intergroup bias. Social groups best satisfy the needs for belongingness and distinctiveness when they are perceived as being positive and distinct in relation to outgroups (Brewer, 1991). In turn, these intergroup comparisons can lead to ingroup favoritism and, consequently, prejudice. ODT has been

linked to prejudices based on gender (Eckes, Trautner, & Behrendt, 2005), nationality (Vignoles & Moncaster, 2007), ethnicity (Henderson-King, Henderson-King, Zhermer, Posokhova, & Chiker, 1997), and self-stereotyping (Pickett, Bonner, & Coleman, 2002).

Common Ingroup Identity

Gaertner and Dovidio's (2000) Common Ingroup Identity Model is a social groups model of prejudice reduction that follows from these two theories of intergroup prejudice as well as from Allport's original contact hypothesis of prejudice reduction. The Common Ingroup Identity Model states that when members of different groups are induced to see themselves as members of an overarching, inclusive group rather than as completely separate groups, attitudes towards former outgroup members will become more positive by promoting pro-ingroup biases.

Instead of looking to *reduce* negative outgroup attitudes, the Common Ingroup Identity Model is focused on extending the *benefits* of ingroup membership to former outgroup members. These benefits include ingroup homogeneity (where ingroup members are viewed as being more similar than they actually are), improved facial recognition, and increased empathy, positive affect, and helping behaviors (Gaertner & Dovidio, 2000).

While the Common Ingroup Identity Model aims to reduce prejudice through recategorization, the model does not propose to eliminate these previously-conceptualized groups. Expecting individuals to completely ignore prejudice-inducing groups like race, sex, or age is impractical. Instead, the Common Ingroup Identity Model proposes that we constantly categorize others into many different categories, and, by making a more inclusive category salient to the individual, those categorizations that

promote prejudice attitudes will be superseded (Gaertner & Dovidio, 2000). This is also known as the dual identity model of categorization. Gaertner and Dovidio suggest that, by allowing for a dual identity, the Common Ingroup Identity Model can account for generalization problems that have been found with Allport's contact hypothesis. Maintaining a dual identity allows the individual to keep differences between subgroups in mind while also acknowledging the similarities that bind these subgroups together into the superordinate group.

A few examples should help to clarify the concepts behind the Common Ingroup Identity Model. In a study examining the relationship between a common ingroup and intergroup threat (Riek, Mania, Gaertner, McDonald, & Lamoreaux, 2010), participants were asked to indicate how much they perceived Whites and Blacks as one group (Americans) or as two separate groups (Caucasian-Americans and African-Americans). Intergroup threat was measured with two scales, one measuring realistic threat (perceptions of competition) and the other measuring symbolic threat (perceptions of different values). According to the Common Ingroup Identity Model, participants who viewed the two racial groups more as one group than as separate groups should have more positive interracial views and experience less intergroup threat. This is what their results showed: stronger feelings of a common identity were related to lower levels of bias, with the relationship being mediated by intergroup threat.

A separate study looked at the effects of a common ingroup identity on nationality bias in the United Kingdom (Stone & Crisp, 2007). After priming their inherent British nationality, participants were presented with the outgroup "French people" and the superordinate identity "European", meant to include both British and French peoples.

Results showed that high identification with the European superordinate group was associated with more positive feelings about the former outgroup (French people). A follow-up study found that the relationship between group identification and outgroup bias was mediated by perceived similarity to the outgroup. Therefore, the significant finding that high European identification led to more positive feelings to the outgroup was partially because of an increased feeling of similarity to the former outgroup. This is congruent with the Common Ingroup Identity Model, which states that perceived similarity between groups should reduce negative intergroup bias and increase positive feelings towards the outgroup (Gaertner & Dovidio, 2000).

A third example shows the Common Ingroup Identity Model's applications in the workplace (Cunningham, 2005). In this study, assistant coaches from various college sports teams were asked to indicate how cohesive they perceived the coaching staff for their team to be, with higher cohesion indicating a common ingroup identity. Participants were then asked to complete a questionnaire about their satisfaction with their coworkers. Results showed that coworker satisfaction significantly increased as perceptions of a common ingroup identity increased, further exemplifying the benefits of a common ingroup identity and extending these benefits to an applied setting.

In summary, the Common Ingroup Identity Model seeks to reduce intergroup prejudice by creating or highlighting an overarching group that includes both the ingroup and the outgroup (Gaertner & Dovidio, 2000). Common ingroup identity primarily aims not to reduce negative bias against the former outgroup, but to extend the positive bias of ingroup membership to these former outgroup members. Additionally, by maintaining the

subgroups that the common ingroup supercedes, the model allows for prejudice reduction without eliminating the distinctiveness that a subgroup potentially offers its members.

Common Ingroup Identity and specific prejudices. The Common Ingroup Identity Model has been applied to multiple types of prejudices. When it was originally conceptualized, the Common Ingroup Identity Model was based around aversive racism (Gaertner & Dovidio, 2005), and many studies employing the model are centered on reducing this specific prejudice. For example, in a field experiment at the University of Delaware, Nier et al. (2001) looked at the impact of a common ingroup identity on survey compliance at a sports event. In this study, interviewers, half of whom were Black, half of whom were White, asked people on their way to the game whether they would be willing to fill out a survey. Common ingroup was manipulated through school affiliation: half of the interviewers wore a hat with the University of Delaware logo on it, and half of the interviewers wore a hat with the other team's logo on it. The manipulation worked, as fans complied with the request significantly more often when the interviewer was affiliated with their school than when they were not. However, there was also an effect of race: Black interviewers were significantly more likely to be complied with when they shared the university affiliation with the fan than when they did not, a result that was not found for White interviewers. This effect was also in the expected direction, with Blacks sharing a common ingroup being afforded more prosocial behaviors as opposed to Black outgroup members being shown more negative social behaviors. Similar results for reducing racism have been found under correlational (Gaertner, Rust, Dovidio, Bachman, & Anastasio, 1994) and experimental conditions (Dovidio et al., 2004).

Another common application of the Common Ingroup Identity Model has been in artificially-induced prejudices between experimentally-created groups (see, for example, Cunningham & Chelladurai, 2004; Dovidio, Gaertner, Isen, & Lowrance, 1995; Dovidio et al., 1997, and Mottola, Bachman, Gaertner, & Dovidio, 1997). An obvious drawback of these experimentally-created groups is that they are lacking in external validity. Groups created by the experimenter, by definition, do not exist outside of the experiment. However, artificial prejudices are popular in prejudice reduction research because of their ease of manipulation and high internal validity. The ease with which ingroups and outgroups can be arbitrarily created in experimental settings is indicative of the power of categorization and recategorization.

The Common Ingroup Identity Model has also been extended to real-life prejudices outside of racism and laboratory-induced prejudice. For example, Houlette et al. (2004) examined the effectiveness of the "Green Circle Program", a prejudice intervention being implemented at a Delaware elementary school. The Green Circle program asks children to think about themselves within a "circle" that also includes the people that the child cares about. After the child creates their circle, the facilitator points out people that the child may have neglected in their original circle; the child is then allowed to expand their circle to include these people. As the program progresses, the child continues to expand their circle until it is inclusive of all humanity. While the Green Circle program is not a direct product of the Common Ingroup Identity Model, the two share a common goal (prejudice reduction) and a common ground on how to reach that goal (expanding the ingroup to include those that were previously perceived as "different").

Results from the Green Circle study found that, while they still preferred playmates that were similar to them, children who participated in the program were more willing to choose playmates that differed from them, suggesting a broader ingroup in terms of friend selection (Houlette et al., 2004). Additionally, prejudice reduction was found not only in terms of racism, but also in regards to sex and weight. The Common Ingroup Identity Model has also been linked to prejudice reduction in terms of ethnicity (Levin, Sinclair, Sidanius, & Van Laar, 2009), regionalism (Maas, Ceccarelli, & Rudin, 1996), class status (Nadler, Harpaz-Gorodeisky, & Ben-David, 2009), and political affiliation (Gaertner et al., 1999). These studies provide evidence of the usefulness of common ingroup identities outside of experimentally-created prejudices.

Common Ingroup Identity and cognition. Some cognitive processes have been linked to the Common Ingroup Identity Model. One obvious cognitive process that has been consistently linked to the model is categorization (Gaertner & Dovidio, 2000; 2005), and, more specifically, social categorization (Cunningham, 2005). Social categorization allows individuals to figure out where they fit into the world by creating distinct categories and then placing themselves and others into these categories. While this process is important for the creation of a social identity, it is also conducive to prejudice through comparisons between ingroups and outgroups (Tajfel & Turner, 1979). The Common Ingroup Identity Model uses categorization as a tool for reducing prejudice: by creating or priming a more inclusive category, differentiation between groups is eliminated and prejudice is reduced (Crisp, Turner, & Hewstone, 2010).

A more application-based cognitive mechanism that has been linked to the Common Ingroup Identity Model is priming. Priming refers to the ability of a stimulus to

cause a future, related association to be more effectively activated (Gaertner & Dovidio, 2000). In terms of a common ingroup identity, priming refers to the ability of incidental experiences to trigger thoughts and emotions in relation to ingroups and outgroups, as well as the potential manipulations of these experiences to reduce prejudice. For example, one study looked at the effects of ingroup and outgroup designators on evaluations of positive and negative traits (Perdue, Dovidio, Gurtman, & Tyler, 1990). In this study, participants were primed with pronouns that either denoted an ingroup orientation (e.g., "we", "us") or an outgroup orientation (e.g., "they", "them"). Participants were then asked to evaluate whether a trait was positive ("helpful", "courteous") or negative ("impolite", "sloppy"). Results indicated a priming effect: participants primed with ingroup pronouns identified positive traits significantly faster than participants primed with outgroup pronouns, and participants primed with outgroup pronouns identified negative traits significantly faster than participants primed with ingroup pronouns.

Need for Closure

One cognitive tool that has not been previously linked to the Common Ingroup Identity Model is *need for closure*, also known as *need for cognitive closure*. Need for closure (NFC) refers to the motivational need for individuals to find clarity, definition, and structure in their environments and their interactions with others (Kruglanski, Webster, & Klem, 1993). Because of this need to find clarity, the individual is urged to find answers to any ambiguous questions that they encounter, even if this leads them to inaccurate or factually wrong answers (Taris, 2000). NFC also causes the individual to shut out information that runs contrary to their currently accepted answer, which, in the case of incorrect answers, can lead to a stubborn acceptance of false beliefs (Kruglanski

& Webster, 1996). Individuals high in NFC have been found to prefer quick answers (Wiersema, van der Schalk, & van Kleef, 2011), view intergroup relations competitively (De Zavala, Cislak, & Wesolowska, 2010), display more group centrism (Orehek et al., 2010), and prefer order and predictability (Van Hiel & Mervielde, 2003). In contrast, individuals low in NFC tend to be less decisive, more open-minded, and more creative (Chirumbolo, Livi, Mannetti, Pierro, & Kruglanski, 2004).

NFC is proposed to consist of several sub-processes. Kruglanski and Webster (1996) describe the process of *seizing and freezing* that defines the way an individual high in NFC would process information. Seizing, also known as the *urgency tendency*, refers to the individual's need to reach a conclusion as quickly as possible, while freezing, also called the *permanence tendency*, encourages the individual to persist in their conclusion by closing it off from any further scrutiny. In tandem, seizing and freezing are posited to cause reduced information processing and increased stereotyping, outcomes that are consistent with those linked to high NFC.

Additionally, in creating a scale measuring dispositional NFC, Webster and Kruglanski (1994) identified five factors: preference for order, preference for predictability, decisiveness, discomfort with ambiguity, and closed-mindedness. In terms of these subscales, individuals high in NFC prefer order and predictability, show more discomfort with ambiguity, and are more decisive and closed-minded, while individuals low in NFC score in the opposite direction.

NFC has been identified as a personality variable. As previously mentioned, Webster and Kruglanski (1994) developed the Need for Closure Scale with the intent of measuring individual differences in NFC. The scale has shown high reliability and

validity, and, along with its obvious implications for NFC research, the scale has been used in studies measuring such related concepts as information processing style (Blanchard-Fields, Hertzog, & Horhota, 2012), right-wing attitudes (Onraet, Van Hiel, Roets, & Cornelis, 2011), religious fundamentalism (Gribbins & Vandenberg, 2011), and consumer search behavior (Houghton & Grewal, 2000).

However, NFC has also been used as a situation-dependent variable in various experiments. One common manipulation to heighten NFC is the creation of time pressure (De Grada, Kruglanski, Mannetti, & Pierro, 1999). By making time pressure salient, such as by giving participants a deadline to reach a decision, individuals can be induced to make quick, decisive answers in a similar manner as those who are high in dispositional NFC. For example, a study by Wiersema et al. (2011) looked at NFC's effect on artistic preferences using participants under time pressure as their high NFC condition. Results showed that participants under time pressure evaluated figurative paintings significantly higher than abstract paintings, supporting their hypothesis that participants high in NFC would prefer art with a clear and obvious meaning. Similar situational inductions of NFC have been used in studies looking at cognitive structure (Van Hiel & Mervielde, 2003) and terrorism (Orehek et al., 2010).

Additionally, while NFC has been found to be a distinct cognitive process, the construct has been linked to other cognitive processes. In their study examining the validity of the Need for Closure Scale, Webster and Kruglanski (1994) found that NFC was correlated with, but distinct from, scales measuring such things as authoritarianism, dogmatism, impulsivity, need for structure, and need for cognition. While many of the items in these scales appeared to measure similar constructs, the overall processes were

deemed distinct. For example, NFC and authoritarianism overlapped significantly for four of the Need for Closure Scale's factors, but not for the fifth (closed-mindedness). The closed-mindedness factor of NFC has also been linked to openness to experience (Kruglanski & Webster, 1996). However, while openness to experience is strictly considered to be a personality trait, NFC is viewed as both a trait and a situation-dependent variable.

Need for Closure and Prejudice

Prejudices rely on stereotypical definitions given to entire categories of individuals or objects. These stereotypes are typically determined through the same types of shallow processing that are seen in high NFC individuals (Wiersema et al., 2011). Therefore, with its reliance on closed-mindedness and categorization, and its link to shallow processing, it is not surprising to find that NFC has been linked to prejudice. In a study looking at the link between NFC and sexism, Roets, Van Hiel, and Dhont (2011) found that differences in this cognitive style were predictive of sexist attitudes. A similar study found a link between NFC, right-wing authoritarianism, and racist attitudes (Van Hiel, Pandelaere, & Duriez, 2004). In both studies, the link was explained through the processes underlying NFC in general: individuals high in NFC tend to seize an answer once they find one and then are unwilling to change that answer. In terms of social groups, this leads high NFC individuals to seize and freeze upon prejudices and stereotypes as they are the most readily available.

NFC has also been examined in terms of the underlying processes behind prejudice attitudes. For example, in a study looking at aggression towards an outgroup as a product of NFC and political affiliation (De Zavala et al., 2010), NFC was found to

cause an interaction between political affiliation and outgroup hostility, with conservatives high in NFC responding significantly more aggressively than all other groups. The researchers posited that, because individuals high in NFC are intolerant of ambiguous situations, the interaction caused participants to interpret ambiguity as conflict and to act aggressively in response. Similar studies have found that individuals high in NFC show increased competitiveness and hostility towards outgroups (De Zavala, Federico, Cislak, & Sigger, 2008), higher perceptions of racial homophily (Flynn, Reagans, & Guillory, 2010), and more stereotypical judgments (Dijksterhuis, van Knippenberg, Kruglanski, & Schaper, 1996).

NFC has even been suggested as the motivational cognitive process underlying prejudice that was originally theorized by Gordon Allport in *The Nature of Prejudice* (Roets & Van Hiel, 2011). In his book, Allport (1954) discussed a theoretical motivated cognitive style that creates prejudice-prone individuals. According to Allport, individuals with this cognitive style would look for quick, definitive answers, be prone to persevering beliefs, prefer order and familiarity, be more decisive and intolerant of ambiguity, and exhibit closed-mindedness. These exact traits have been discussed as the underlying mechanisms and subsets of NFC. Allport also stated that individuals with this cognitive style would believe social groups were more homogenous than they actually were; studies on NFC have shown that individuals high in NFC perceive groups to be more homogenous (Dijksterhuis, et al., 1996; Flynn et al., 2010). While Allport's eerie accuracy in predicting this cognitive style is impressive, the more important implications of these findings are that NFC has a definitive motivational tie to prejudice attitudes.

Need for Closure and Prejudice Reduction

While research into NFC's effect on prejudice reduction techniques has only recently just begun, preliminary studies suggest that NFC may be a surprising moderator for the effectiveness of prejudice reduction. For example, Dhont, Roets, and Van Hiel (2011) conducted five studies on the moderating effects of NFC on the prejudice reduction capabilities of intergroup contact. In each of these studies, a moderation effect was found, with participants high in NFC being more responsive to intergroup contact as a means of reducing prejudice than participants low in NFC. These findings seem to run counter to the theory behind NFC: individuals high in the construct should seemingly seize and freeze upon their stereotypical beliefs and, therefore, be less responsive to prejudice reduction techniques. However, the authors propose that intergroup contact as a prejudice reduction technique is able to avoid the tendency to seize and freeze because contact does not confront the individual with what is "right" or "wrong". Intergroup contact also allows the individual high in NFC to reduce their ambiguity about a stereotype by clarifying or fixing their stereotypical construct.

To my knowledge, this is the only study that has examined the relationship between NFC and prejudice reduction. However, the findings of this study give a direction to future research into this relationship. The results support research into other techniques stemming from intergroup contact, suggesting that techniques relevant to contact may be more effective for individuals with high levels of NFC. The results also suggest that high NFC may *increase* the effectiveness of prejudice reduction techniques, which seems counterintuitive but is empirically supported (Dhont et al., 2011). Of course,

these directions are reliant on a single article that discusses five studies, so more research is necessary to improve the validity of the research.

Rationale

The biggest problem facing the Common Ingroup Identity Model is its applicability outside of the laboratory and over a long-term basis. The model has found considerable evidence in experimental settings, using both artificial and real social groups. However, some have questioned the real-world feasibility of a prejudice reduction technique that aims to supersede such powerful, socially-ingrained categories as race, sex, and ethnicity (Gaertner & Dovidio, 2000). The study of cognitive variables such as NFC in terms of the Common Ingroup Identity Model could help identify what situations and dispositions enhance the effectiveness of the model in the real world. Situations inducing NFC, such as salience of terrorism (Orehek et al., 2010) and time pressure (De Grada et al., 1999), have been shown to enhance both ingroup identification and interdependence with others. In terms of disposition, high levels of NFC have previously been linked to higher levels of effectiveness with other prejudice reduction techniques (Dhont et al., 2011). Therefore, in a real world setting, the Common Ingroup Identity Model could be tailored more effectively if used in tandem with a heightened NFC situation (such as time pressure) or if targeted towards high NFC individuals specifically.

Hypotheses

Based on previous findings about the effects of inducing a common ingroup identity on prejudice attitudes (Gaertner & Dovidio, 2000), I predicted that participants

who were asked to think of an outgroup member as part of a shared ingroup would exhibit lower levels of prejudice attitudes than participants who were not asked to do so. Additionally, based on previous research into NFC and prejudice (De Zavala et al., 2008; Orehek et al., 2010), I predicted that participants high in dispositional NFC would exhibit higher levels of prejudice attitudes than participants low in dispositional NFC. I also predicted that participants in a time pressure situation (a manipulation shown to invoke heightened NFC; De Grada et al., 1999) would exhibit higher levels of prejudice attitudes than participants under normal circumstances.

Finally, based on the preliminary link between NFC and prejudice reduction (Dhont et al., 2011), and the links between the Common Ingroup Identity Model and cognition (Gaertner & Dovidio, 2000), I predicted that NFC would moderate the effectiveness of the Common Ingroup Identity Model on prejudice reduction. Specifically, I predicted that participants with higher levels of dispositional NFC would be more responsive to the intervention than participants with lower levels of NFC. I also predicted that participants induced into a high NFC state would be more responsive to the intervention than participants not so induced. Finally, I predicted that participants high in dispositional NFC who are induced into a high NFC state would show the largest decrease in prejudice attitudes under the Common Ingroup Identity Model.

CHAPTER III

METHOD

Participants

Participants were 44 undergraduate students (9 males, 35 females; 4 African-Americans, 40 Caucasians) at Eastern Kentucky University who were given partial course credit for their participation in the study. Participants were recruited online via the EKU Sona system. Participants were randomly assigned to a Time Pressure condition (19 Time Pressure, 25 No Pressure) and an Ingroup condition (20 Ingroup, 24 Outgroup). Average age was 20.6 (*SD* = 5.0).

Additionally, 300 undergraduate students at EKU participated in the online version of part one of the study. Participation in the online version of part one did not require participation in part two; therefore, only 18 of these participants were used to test the hypotheses. However, these participants were included in the post-hoc validation of the fifteen-item Need for Closure scale (Roets & Van Hiel, 2011b). Demographic information was not collected for part one participants unless they completed part two.

Materials

Dispositional Need for Closure

Dispositional NFC was measured using a fifteen-item version of the Need for Closure scale (Roets & Van Hiel, 2011b; Cronbach's $\alpha = .87$). The fifteen-item scale was developed from Webster & Kruglanski's (1994) original, 42-item Need for Closure Scale. Example items from this scale are, "I don't like situations that are uncertain", and

"When I have made a decision, I feel relieved" (see Appendix A for all items). Participants rated items using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). Mean ratings on scale items were obtained for each participant, with overall higher scores indicating higher levels of NFC. For data used to test the hypotheses, mean ratings were 3.44 (*SD* = .63); for data used in the post-hoc validation, mean ratings were 3.52 (*SD* = .53). For use in the MANOVA analysis, a dichotomous variable was created, splitting participants into a *high* or *low* condition that was determined by the overall median (3.40).

Self-Esteem

Self-esteem was measured using a ten-item version of the Rosenberg Self-Esteem scale (Rosenberg, 1965; Cronbach's $\alpha = .91$). Example items from this scale are, "I feel that I have a number of good qualities," and "I wish I could have more respect for myself" (see Appendix B for all items). Participants rated items using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). Items 2, 5, 6, 8, and 9 were reverse-coded. Mean ratings on scale items were obtained for each participant, with overall higher scores indicating higher self-esteem. For data used in the post-hoc validation, mean ratings on this scale were 3.89 (*SD* = .79).

Conscientiousness

Conscientiousness was measured using a ten-item version of the conscientiousness subscale of the Big-Five Personality Test (Goldberg, 1992; Cronbach's $\alpha = .82$). Example items from this scale are, "I am always prepared," and "I make a mess of things" (see Appendix C for all items). Participants rated items using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). Items 2, 6, 8, and 10 were reverse-

coded. Mean ratings on scale items were obtained for each participant, with overall higher scores indicating higher levels of conscientiousness. For data used in the post-hoc validation, mean ratings on this scale were 3.53 (*SD* = .65).

Extraversion

Extraversion was measured using a ten-item version of the extraversion subscale of the Big-Five Personality Test (Goldberg, 1992; Cronbach's α = .92). Example items from this scale are, "I feel comfortable around people," and "I am quiet around strangers" (see Appendix D for all items). Participants rated items using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). Items 1, 3, 6, 7, and 10 were reverse-coded. Mean ratings on scale items were obtained for each participant, with overall higher scores indicating higher levels of extraversion. For data used in the post-hoc validation, mean ratings on this scale were 3.14 (*SD* = .90).

Guilt Questionnaire

Prejudice was measured using a five-item Guilt Questionnaire (Appendix E). This questionnaire was administered as the operational definition of the dependent variable, meant to measure prejudice. The questionnaire was adapted from a similar design used by Sommers and Ellsworth (2000), with items tailored to better fit a scenario involving the Olympics. The first four items on the scale are, "The results of the tests conducted by the IOC are probably correct," "I believe Mendoza when he says that he is clueless as to the test results," "I believe that Mendoza is guilty of doping," and "Mendoza should have been stripped of his medal." The fifth item of the scale asks participants to indicate which punishment they believe that the athlete should receive. Participants rated items using a 7-point Likert scale (for items 1-4, 1 = *strongly disagree*, 7 = *strongly agree*; for item 5,

choices are the severity of punishment, from 1 = *no punishment*, to 7 = *lifetime ban*). Item 2 was reverse-coded. Mean ratings on items 1-4 were obtained for each participant, with overall higher scores indicating higher levels of prejudice attitudes (M = 4.81, SD = 1.21). Higher scores on item 5 indicate more severe levels of punishment (M = 3.45, SD = 1.45).

Big-Five Personality Test

A 100-item version of the Big Five Personality Test (Goldberg, 1992) was present in the study to enhance the time pressure manipulation. The questionnaire was not actually administered in the study, but a stack of the questionnaire was kept on the table near the researcher. See Appendix F for all items. The questionnaire uses a 9-point Likert scale (1 = *extremely inaccurate*, 9 = *extremely accurate*), with higher scores indicating higher levels of that personality dimension. The presence of this questionnaire was simply to create the illusion that the participant had more surveys to fill out than they actually do, which may have increased feelings of time pressure for participants in the time pressure condition.

Procedure

The procedure for the current study underwent two notable changes. Participant recruitment was taking significantly longer than expected under the original procedure, so a procedural change was made to put part one of the study online. After this change was implemented, participant recruitment remained at an extremely low rate. Therefore, a second procedural change was made to allow part two (which required in-person participation) to be visible on the sign-up list prior to completion of Part One.

Protocol One

Participants signed up for the study online via the Sona system, where it was listed under the name "Personality and the Olympics." The study consisted of two parts, both of which were conducted in-person. Participants signed up for both parts upon initial sign up.

After participants arrived for Part One of the study, I handed out the Part One Consent Forms (Appendix G) and followed this script:

> *Hello. My name is Bradlee Gamblin. I am a graduate student here at EKU, and this study is for my graduate thesis. Thank you for coming today. This is part one of a two-part study. Before we begin, I will read you the consent form that you were given when you arrived. You are welcome to read along if you would like. (Read Consent Form). In part one of this study, you will be asked to fill out four short surveys about your personality. Please do not write your name on the surveys. Do you have any questions before we begin? (Answer questions). We will now begin. Your responses are anonymous, and there are no right or wrong answers. Please try to be honest.*

Participants were then given the Need for Closure Scale (Roets & Van Hiel, 2011b), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), and a version of the Conscientiousness and Extraversion subscales of the Big-Five Personality Test (Goldberg, 1992). After completing the surveys, participants were given the Part One Debriefing Form (Appendix H) which explained what the four scales measured and reminded them that they still needed to complete part two of the study.

When participants arrived for the second part of the study, I handed out the Part Two Consent Forms (Appendix I) and followed this script:

> *Hello. My name is Bradlee Gamblin. I am a graduate student here at EKU. Thank you for participating in my study today. Before we begin, I will read you the consent form that you were given when you arrived. You are welcome to read along if you would like. (Read Consent Form). In this study, you will be asked to read an article about something that happened at this past summer's Olympic Games. The passage is from an Associated Press news article printed in the Lexington Herald-Leader. You will then be asked to fill out a questionnaire pertaining to what you have read as well as a few questionnaires about your personality. Please do not write your name on any of the questionnaires. Do you have any questions before we begin? (Answer questions). We will now begin. The purpose of this study is to find out opinions on some procedures used in this summer's Olympics. Your responses are anonymous, and there are no right or wrong answers. Please try to be honest.*

Participants were then presented with a simulated news article (Appendices J and K). For participants in the *Ingroup* condition, the athlete was labeled as being from the United States. For participants in the *Outgroup* condition, the accused was simply referred to as an Olympic athlete. There were no other differences in the article between conditions. This ingroup manipulation was based on past research that has shown that a common ingroup can have an effect on opinions (Stone & Crisp, 2007) as well as research into aversive racism in the courtroom (Sommers & Ellsworth, 2000).

After the participants read the article, they were asked to summarize the article using a Summary Sheet they were provided (Appendix L). The purpose of the summary was to give participants an opportunity to re-read the article and, potentially, take further note of the athlete's status as either an outgroup or an ingroup member. After participants had completed their summary, the situational NFC manipulation was implemented. A similar procedure to that used by De Grada et al. (1999) was followed. For participants in the *Time Pressure* condition, I followed this script:

> *Now you will answer a few questionnaires about this crime and fill out a personality questionnaire. Before you all arrived today, the janitors came up to me and told me that they would need to clean this room at about (state the time that the study began). I informed them that I had already scheduled the room for research at that time, but that I would let you all know and try to finish with enough time for them to clean. I am only telling you because there's another group coming in at (state the next 30-minute block of time), and I want to try to let them in here between your two groups. Of course, still answer to the best of your ability and answer honestly.*

Participants in the *No Pressure* condition were only informed that they would be answering a few questionnaires and given a reminder to answer honestly.

After the time pressure manipulation was implemented, participants were given a questionnaire assessing the guilt of the athlete from the article (Appendix E). The questionnaire was adapted from a similar design used by Sommers and Ellsworth (2000), with items tailored to better fit the Olympic scenario. Participants were then given a demographics sheet (Appendix M).

At this point, the study was complete. Participants were then given the Part Two Debriefing Form (Appendix N), which I read to them. After asking for and answering any questions the participants had, I thanked them for participating in the study and informed them that they were free to leave.

Protocol Two

A procedural change was implemented one month into data collection in an attempt to increase participant sign-up rates. Participants seemed hesitant to sign up for a study that required committing to two in-person meetings, and studies conducted online (at least at EKU) have much higher participation rates than those conducted in-person. Therefore, the study was changed from being listed as one study with two in-person meetings to two separate studies, with Part One being conducted online and Part Two being conducted in-person.

Under Protocol 2, participants signed up for Part One of the study online under the name "College Student Opinions, Attitudes, and Personalities." Part One was administered online via the EKU Sona system.

After participants signed up for the study, the study automatically began. Participants were first presented with the Online Consent Form (Appendix O), which was slightly modified from the original Part One Consent Form (Appendix G) to indicate that Part One was now being listed as a separate study.

Participants then completed the 15-item Need for Closure Scale (Roets & Van Hiel, 2011b), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), and a version of the Conscientiousness and Extraversion subscales of the Big-Five Personality Test (Goldberg, 1992). After completing the surveys, participants were presented with the

Online Debriefing Form (Appendix P), which explained what the four scales measured and informed them that a separate study (part two of the full study) was available for sign-up. Because the original protocol explicitly told participants that parts one and two were related to each other, the mention of the second study does not seem to create a confound. After being presented with their debriefing forms, participants had completed Part One.

Once participants had completed Part One of the study, a separate study, entitled "Psychology at the Olympic Games," was made available to them on the Sona system. This study represented Part Two of the full study, and was conducted in-person.

When participants arrived, they were given an In-Person Consent Form (Appendix Q). The remaining procedure for Part Two was identical to that used in the original protocol, except that the debriefing form was slightly changed to reflect the administration of Part One online (see Appendix R) and the 15-item Need for Closure scale (Roets & Van Hiel, 2011b) was administered a second time in order to look for differences in NFC scores between the Time Pressure and No Pressure conditions.

Protocol Three

A second procedural change was made one month after Protocol Two had been implemented. Again, this change was done in an attempt to increase participation in the study.

The only change between Protocol Two and Protocol Three was that participants were able to view and sign up for Part Two of the full study before having completed Part One. This change was made in order to allow Part Two to be visible to participants upon their initial viewing of the EKU Sona sign-up page. I feared that participants were

signing up for all of their studies at once and were therefore never seeing Part Two at all (since Part Two was invisible to participants until they had completed Part One).

Other than this change, the procedure for Protocol Three was the same as Protocol Two.

CHAPTER IV

RESULTS

Dependent Measures

Before testing the hypotheses, preliminary analyses were conducted on the dependent variables to test for reliability and similarity. First, a reliability analysis was conducted on the four items of the Guilt Questionnaire to test for inter-item consistency. Results showed a Cronbach's α of .89, indicating good internal consistency.

Next, bivariate correlations were obtained between the Guilt Questionnaire and the Punishment variable. Logically, participants who assign higher levels of guilt to the athlete should also assign higher levels of punishment to the athlete. Results confirmed this, showing that Guilt was positively correlated with Punishment ($r = .56$, $p = .00$), indicating a significant and moderate relationship between the two dependent variables.

The strong relationship between the two dependent variables may suggest that they should be collapsed into a single variable. However, they measure separate constructs. The four items of the Guilt variable asked participants for their attitudes towards the athlete, while the Punishment item asked participants to assign a level of punishment to the athlete. Therefore, the variables were kept separate to test the hypotheses, and multivariate analyses were conducted.

Hypothesis Analysis

To test the hypothesized main effects of the ingroup manipulation, time pressure manipulation, and dispositional NFC, and the hypothesized interactions between these

variables, on the Guilt and Punishment dependent variables, a 2 X 2 X 2 Multivariate Analysis of Variance (MANOVA) was conducted. Specifically, I expected to find that participants in the Ingroup condition would have lower scores on the DVs than the Outgroup condition, that participants in the No Pressure condition would have lower scores on the DVs than the Time Pressure condition, that participants low in dispositional-NFC would have lower scores on the DVs than participants high in dispositional-NFC, that participants high in dispositional-NFC or in a high-NFC situation would be more responsive to the Common Ingroup Identity Model, and that participants high in dispositional-NFC who were in a high-NFC situation would be the most responsive to the model.

Results of the multivariate omnibus tests yielded a significant main effect of Ingroup, $F = 3.61$, $p = .04$, $\eta^2 = .22$, but no significant main effects for Time Pressure, $F = 1.65$, *ns* (for Punishment, $M_{TimePressure} = 3.29$, $SD = .39$, $M_{NoPressure} = 3.50$, $SD = .31$; for Guilt, $M_{TimePressure} = 5.07$, $SD = .35$, $M_{NoPressure} = 4.53$, $SD = .27$), or Dispositional NFC, $F = .24$, *ns* (for Punishment, $M_{LowNFC} = 3.23$, $SD = .31$, $M_{HighNFC} = 3.56$, $SD = .39$; for Guilt, $M_{LowNFC} = 4.76$, $SD = .28$, $M_{HighNFC} = 4.84$, $SD = .34$). The omnibus tests also revealed no significant interactions between any two of the three variables ($F_{IngroupXTimePressure} = .44$, $F_{IngroupXDispositional} = 1.00$, $F_{TimePressureXDispositional} = .60$, all *p*s *ns*); however, the three-way interaction revealed a finding approaching significance, $F = 2.53$, $p = .10$, $\eta^2 = .16$. Therefore, follow-up univariate tests were conducted for the Ingroup main effect and the three-way interaction effect.

The results of the univariate tests revealed no significant main effect of Ingroup on either Punishment ($F = 3.19$, *ns*; $M_{Ingroup} = 2.95$, $SD = .36$; $M_{Outgroup} = 3.84$, $SD = .34$)

or the Guilt Questionnaire ($F = .43$, *ns*; $M_{Ingroup} = 4.94$, $SD = .32$; $M_{Outgroup} = 4.66$, $SD = .31$). Results also showed no significant three-way interaction for Punishment ($F = 3.97$, *ns*). However, a significant interaction was found for scores on the Guilt Questionnaire ($F = 4.31$, $p = .05$, $\eta^2 = .14$). Participants in the No Pressure condition who were high in Dispositional NFC evaluated the athlete as being more guilty when they were told that he was an American ($M = 5.70$, $SD = .53$) than those who were not ($M = 3.79$, $SD = .45$), while participants low in Dispositional NFC gave the athlete higher guilt ratings when no country of origin was specified ($M = 4.88$, $SD = .59$) than when he was labeled as an American ($M = 3.75$, $SD = .59$) (see Figures 1 and 2). In comparison, Guilt scores were relatively stable across Ingroup conditions and dispositional NFC for participants in the Time Pressure condition. These results suggest that, without time pressure, participants respond differently to the Common Ingroup Identity Model depending on their levels of dispositional NFC.

While these results are significant, they are in the opposite direction predicted by the current study's hypothesis. Therefore, the hypothesis that participants high in dispositional NFC who are placed in a high NFC situation will be most responsive to the Common Ingroup Identity Model was not supported.

Post-hoc Analyses

Two-Way Univariate Analysis of Variance

Results showed a *p*-value approaching significance for the three-way interaction of Ingroup, Time Pressure, and Dispositional NFC, and univariate analyses revealed a significant three-way interaction for Guilt in which participants in the Time Pressure condition showed fairly stable scores regardless of Ingroup condition or dispositional

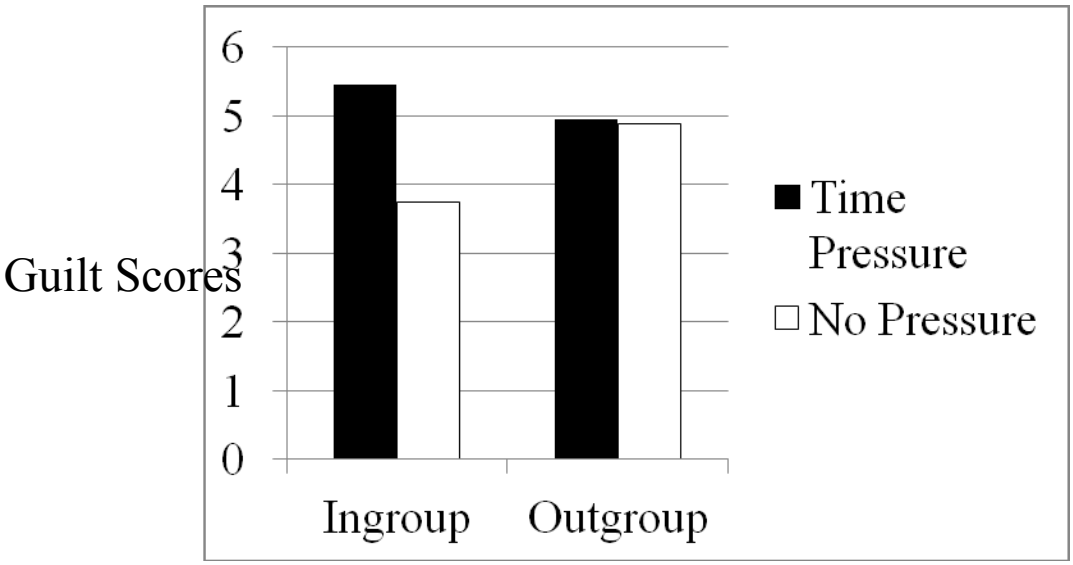

Figure 1. Ingroup X Time Pressure Effect on Guilt Scores for Low-NFC Participants.

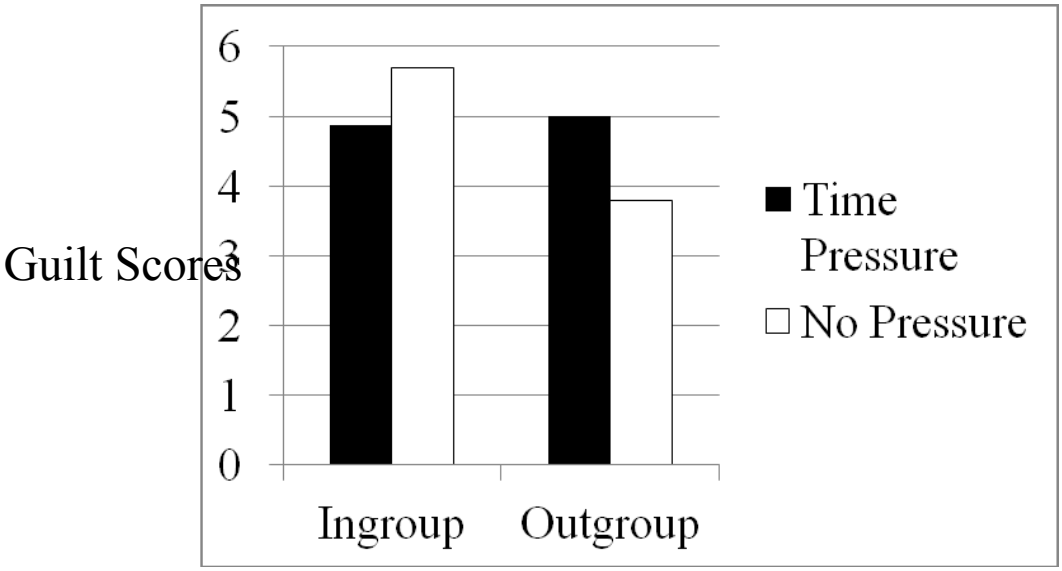

Figure 2. Ingroup X Time Pressure Effects on Guilt Scores for High-NFC Participants.

NFC, while participants in the No Pressure condition showed inverse reactions to the Ingroup manipulation dependent upon their dispositional NFC level. Therefore, it was hypothesized that, when excluding participants in the Time Pressure condition, a significant interaction would be found between Ingroup and Dispositional NFC for Guilt. Specifically, I predicted that participants high in dispositional NFC would score higher on the Guilt Questionnaire when in the Ingroup condition, and that participants low in dispositional NFC would score higher on the Guilt Questionnaire when in the Outgroup condition.

To test this hypothesis, a 2 X 2 Analysis of Variance (ANOVA) was conducted on participants in the No Pressure condition, with Dispositional NFC and Ingroup as the independent variables and Guilt scores as the dependent variable. Results revealed a significant interaction effect, $F = 8.09$, $p = .01$, $\eta^2 = .34$. A simple main effect analysis was conducted to test for mean differences in the Ingroup condition between participants high and low in NFC. As predicted, participants high in NFC had higher Guilt scores ($M = 5.70$, $SD = .69$) than participants low in NFC ($M = 3.75$, $SD = 1.88$) (see Figure 3). Although this difference was not statistically significant ($t = -2.17$, $p = .07$), this is likely due to the very low numbers that each cell had been reduced to after eliminating participants in both the Time Pressure and Outgroup conditions. Therefore, the post-hoc hypothesis that, when not under time pressure, participants respond to the Common Ingroup Identity Model inversely depending on their level of dispositional NFC was partially supported.

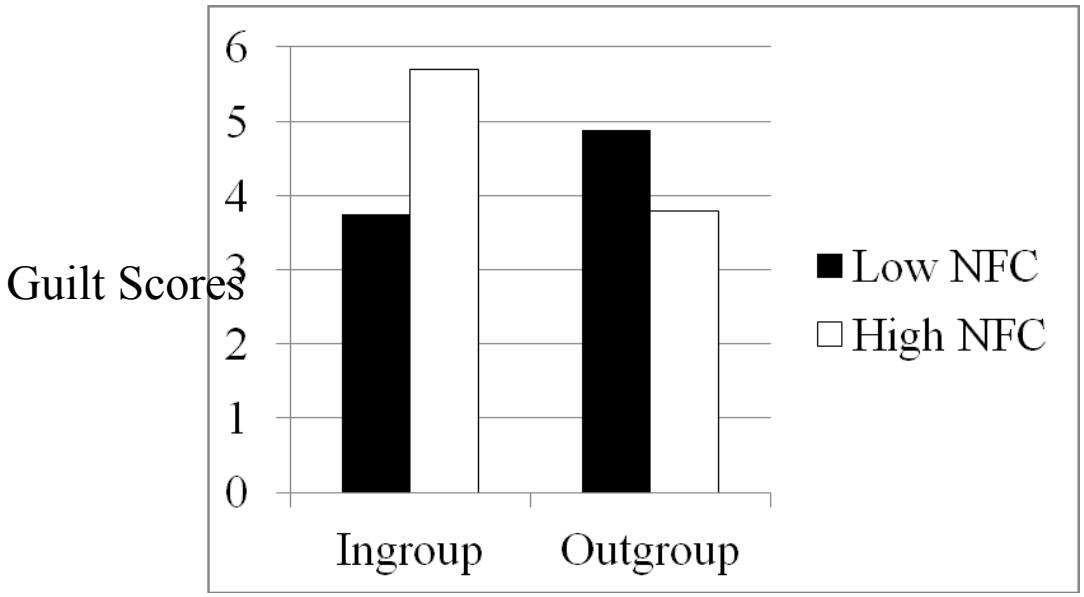

Figure 3. Ingroup X Dispositional NFC Effects on Guilt Scores, Excluding Time Pressure.

Validation of the 15-Item Need for Closure Scale

Once Protocol Two was implemented, Part One of the study was administered completely online. This new protocol changed the presentation of the full study from one two-part study into two separate studies, allowing participants to complete Part One without being obligated to complete Part Two. Because of this, as well as the much higher participation rate for online studies at EKU in comparison to in-person studies, the vast majority of participants who completed Part One online (282 out of 300) were not used to test the hypotheses. However, these participants were able to be used in a post-hoc validation of the new 15-item Need for Closure scale (Roets & Van Hiel, 2011b). A reliability analysis was conducted to test for inter-item consistency. Results showed a Cronbach's α of .80, indicating good internal consistency for the measure. In their

analysis, Roets and Van Hiel (2011b) found a Cronbach's α of .87, a similar (if slightly higher) coefficient.

Next, bivariate correlation analyses were conducted between the 15-item Need for Closure Scale (Roets & Van Hiel, 2011b) and conscientiousness and extraversion, two variables that have been previously linked to NFC. Results showed that NFC was positively correlated with conscientiousness (r = .24, p = .00) and negatively correlated with extraversion (r = -.16, p = .01). Roets and Van Hiel's validation study found similar results for conscientiousness, but their analysis indicated no significant relationship with extraversion. This may be the result of a difference between the extraversion and conscientiousness scales: the versions used in the current study are only ten items long and were originally chosen as simple filler surveys.

Finally, a confirmatory factor analysis with Varimax rotation was conducted to test the five-factor structure of the 15-item Need for Closure Scale (Roets & Van Hiel, 2011b). The original 42-item Need for Closure Scale (Webster & Kruglanski, 1994) has been found to consist of five factors. Results showed that 11 of the 15 items loaded onto their associated factors: Factor 1 was Preference for Order, Factor 2 was Preference for Predictability, Factor 3 was Closed-Mindedness, Factor 4 was Decisiveness, and Factor 5 was Discomfort with Ambiguity (see Table 1 for factor loadings). Eigenvalues for the five factors were 4.30, 1.49, 1.39, 1.23, and 0.89, respectively, and they explained over 62% of the variance in the items.

The fact that four of the items did not load onto their respective factors is not necessarily problematic. While the items on the 15-item scale were chosen to include 3 items from each of the five factors, each specific item was chosen because of its

Table 1. Confirmatory Factor Analysis with Varimax Rotation on the 15-Item Need for Closure Scale.

Predicted Item Factors	Order	Predictability	Closed-Mindedness	Decisiveness	Discomfort with Ambiguity
Order 1	**.785**	.207	-.017	.140	.166
Order 2	**.838**	.136	.071	.091	.084
Order 3	**.851**	.106	.112	.058	.043
Predictability 1	.212	**.681**	.064	.233	.111
Predictability 2	.051	.421	**.613**	.113	-.055
Predictability 3	.351	**.608**	.362	.065	.149
Closed-Mindedness 1	.065	.097	.220	-.012	**.800**
Closed-Mindedness 2	.186	-.030	**.667**	.118	.057
Closed-Mindedness 3	-.058	-.010	**.638**	-.139	.107
Decisiveness 1	.054	-.027	-.212	**.704**	.142
Decisiveness 2	.197	.226	.088	**.719**	-.072
Decisiveness 3	.025	.353	.284	**.610**	.019
Ambiguity 1	.159	.119	-.076	.078	**.814**
Ambiguity 2	.071	**.783**	-.116	.062	.057
Ambiguity 3	.175	**.486**	.254	.306	.350

relevance to NFC overall, not because it was representative of the factor. Roets and Van Hiel (2011b) actually envisioned their shortened Need for Closure Scale as consisting of one dimension. Therefore, it is impressive that a CFA is still capable of loading most of the items onto their corresponding factors and makes the shortened scale even more similar to the original than the authors may have anticipated.

CHAPTER V

DISCUSSION

The Common Ingroup Identity Model (Gaertner & Dovidio, 2000) is an important contribution to prejudice reduction research. When applicable, the model provides a systematic tool for subverting negative outgroup stereotypes and avoiding group biases. The process of recategorization forces the individual or group to think about previous outgroup members as being a part of a shared ingroup. This shared ingroup is the catalyst for prejudice reduction in the model: pro-ingroup biases that were originally used by the individual to create favoritism against the outgroup members is now employed in tandem with the previous outgroup members, affording them prosocial benefits such as improved face recognition and increased empathy.

However, translating the well-documented laboratory results supporting the Common Ingroup Identity Model (Gaertner & Dovidio, 2000) to real-world situations can be problematic. For example, Rutchick and Eccleston (2010) investigated the effects of a common ingroup identity on persuasive appeals made by outgroup members. Their results showed that, because Democrats and Republicans conceive of the superordinate group "Americans" differently, a persuasive appeal from the political outgroup was not convincing when they invoked a common ingroup. A similar limitation to the model has been found in relation to Hurricane Katrina (Dach-Gruschow & Hong, 2006). Other limitations include the impact of the subgroup's perceived role in the superordinate group (Sindic & Reicher, 2009), the impact of subgroup homogeneity on superordinate-level

bias (Cunningham, 2006), and the creation of new, shared outgroup conflicts once a common ingroup has been formed (Kessler & Mummendey, 2001).

Investigating cognitive variables, such as NFC, in relation to the Common Ingroup Identity Model enables researchers the opportunity to account for at least some of the variation that the model would encounter in real-life scenarios. Some aspects of cognition, such as categorization (Cunningham, 2005) and priming (Perdue et al., 1990), have been previously linked to the model. However, the relationship between the model and NFC, a motivational need to find clarity and structure (Kruglanski et al., 1993), had not been previously explored. Because of its known ties to prejudice (e.g., De Zavala et al., 2010) and preliminary links to another prejudice reduction technique (Dhont et al., 2011), the current study looked into a potential link between NFC and the Common Ingroup Identity Model.

The current study investigated the effects of both dispositional (Kruglanski et al., 1993) and situational (De Grada et al., 1999) NFC on the Common Ingroup Identity Model (Gaertner & Dovidio, 2000). Specifically, I predicted that individuals evaluating an athlete under a common ingroup label would assess him more favorably than individuals who were given no ingroup label. I also predicted that individuals low in either dispositional or situational NFC would give more favorable assessments than individuals high in NFC. Finally, I predicted three interactions: individuals high in either dispositional or situational NFC would be more responsive to the model than individuals low in NFC, and individuals high in both dispositional and situational NFC would show the largest decrease in prejudice attitudes under the model.

Results of the current study found support for none of the proposed hypotheses. In terms of both situational and dispositional NFC, no significant relationship was found for either the prejudice or discrimination measures. This goes against previous findings about dispositional NFC's ties to prejudice (De Zavala et al., 2010; Flynn et al., 2010), although past research has not looked at dispositional NFC's links to prejudice in terms of a target's guilt. Therefore, the current study provides evidence that dispositional NFC's known relationship with prejudice and discrimination may not extend to the realm of guilt assessment or punishment administration. On the other hand, situational NFC's link to prejudice and discrimination has not previously been examined. Therefore, the current study suggests that situational NFC does not share dispositional NFC's direct relationship with prejudice or discrimination.

Additionally, while multivariate omnibus results revealed a significant effect of the ingroup manipulation, univariate analyses failed to find significance for either of the two dependent variables. These results go against the vast majority of findings in support of the Common Ingroup Identity Model's impact on prejudice and discrimination (e.g., Gaertner & Dovidio, 2000), suggesting another potential boundary condition for the model related to evaluations of guilt. However, the punishment variable did approach significance, with lower scores being found in the Ingroup condition. This indicates a trend in the data in the direction of the proposed hypothesis, and, given a larger participant pool, results for the punishment variable may have reached significance.

The predicted two-way interactions between situational and dispositional NFC and the Common Ingroup Identity Model were also not supported by the data. As there has been only one previous study into NFC's effects on prejudice reduction (Dhont et al.,

2011), and the prejudice reduction technique used in that study was different than the one used here, these results do not go against any previous findings. However, the current study does suggest that the results of the previous study, which showed that individuals higher in NFC were more responsive to intergroup contact, cannot be generalized to prejudice reduction techniques in general. However, this does not necessarily mean that the findings of the prior study are isolated only to intergroup contact. There are significant differences between intergroup contact and common ingroup identity as prejudice reduction methods: intergroup contact explicitly relies on interactions with an outgroup member (Allport, 1954), while the Common Ingroup Identity Model attempts to cognitively subvert the outgroup label altogether through the process of recategorization (Gaertner & Dovidio, 2000). Therefore, the results of the current study only suggest that NFC's effects on prejudice reduction may be limited to techniques that rely on contact.

The predicted three-way interaction between situational NFC, dispositional NFC, and the Common Ingroup Identity Model was also not supported. However, a result approaching significance was found in the multivariate omnibus tests, and univariate results revealed an interesting, unpredicted three-way interaction for the Guilt DV. Participants in the Time Pressure condition appear to give relatively stable scores regardless of dispositional-NFC and Ingroup condition; however, participants in the No Pressure condition showed inverse reactions to the common ingroup manipulation, which was dependent on their levels of dispositional-NFC.

In other words, the effects of dispositional-NFC and the Ingroup manipulation seem to have been washed out when participants were placed into the time pressure condition, causing participants to rate the athlete's guilt based on something other than

their NFC levels or the athlete's ingroup status. For example, a potential criterion that participants may have used under time pressure was an evaluation of the merits of the two arguments given in the article.

Conversely, when participants were placed into the No Pressure condition, they had enough time to both evaluate the athlete's ingroup status and allow the effects of dispositional NFC to distort their evaluations of the athlete's guilt. Under this assumption, it appears that participants responded in opposite directions to the Ingroup manipulation depending on whether they were high or low in dispositional NFC, with participants high in NFC rating the athlete as more guilty when a common ingroup identity was evoked. A post-hoc analysis, which excluded participants in the Time Pressure condition, supported this. Therefore, the current study suggests that, under normal conditions, while the model is effective for individuals low in dispositional NFC, the use of a common ingroup identity to reduce prejudice in individuals high in dispositional NFC may actually cause an *increase* in prejudice.

Finally, a post-hoc validation of the 15-item Need for Closure Scale (Roets & Van Hiel, 2011b) was able to replicate most of the findings of the original validation study, including good reliability and a positive correlation with conscientiousness. A confirmatory factor analysis was also able to correctly extract the majority of the five-factor model that the original Need for Closure Scale (Webster & Kruglanski, 1994) is theorized to consist of. Therefore, the current study was able to give support to the use of the shortened scale as a valid replacement of the original, 42-item scale.

Overall, the current study adds to the literature on NFC's ties to prejudice and prejudice reduction, to the literature on the Common Ingroup Identity Model, and to the

literature on the 15-item Need for Closure Scale (Roets & Van Hiel, 2011b). Results indicate that the relationship between NFC and prejudice may not extend to the realms of guilt and punishment. Additionally, NFC's tentative link to prejudice reduction may be limited to those methods involving intergroup contact, as no effect was found between NFC and the Common Ingroup Identity Model. If anything, participants high in dispositional NFC may actually respond *negatively* to the evocation of a common ingroup identity. Results also revealed guilt and punishment assessment as potential boundary conditions of the Common Ingroup Identity Model, although a larger participant pool likely would have found significance for the punishment variable. Finally, a post-hoc validation of the 15-item Need for Closure Scale provided evidence to support its use in place of the original, 42-item scale.

Limitations

The major limitation of the current study is that there are not enough participants per cell to expect much in the way of significant findings. The minimum suggested number of participants needed in order to draw real conclusions is 20 per cell (Simmons, Nelson, & Simonsohn, 2011); in contrast, the current study varied between 7 and 2 participants per cell in the three-way interaction. Because of this, all results, both significant and insignificant, should be viewed as preliminary and only suggestive of a potential trend that the results may follow once more data have been collected.

Another limitation of the current study is that the participant pool being used is not representative of the general population. For example, data on demographics revealed that the sample was 76% female and 87% Caucasian, numbers that do not match those of the rest of the United States. Additionally, all participants were undergraduate students at

EKU who were enrolled in a psychology course, making generalization to non-collegiates and other geographic areas even more problematic. Future research should explore a more diverse population, consisting of a more proportional number of men and non-collegiate individuals.

A third limitation to the current study is that small procedural changes were implemented in the midst of data collection. Originally, the study was conceived as an in-person study, administered at two separate points in time. This was changed to put the first part of the study online; later, mandatory completion of Part One before Part Two was removed in order to increase visibility of the second part of the study. These procedural changes were done in an attempt to increase participant interest in the study, as participants seemed hesitant to sign up for a study requiring two in-person meetings. The decision was at least a partial success: 26 participants signed up for Part Two of the study since the first procedural change, and 300 participants signed up for the online version of Part One. While most of those 300 participants could not be used for the primary analysis, I was able to include them in a post-hoc analysis that tested the validity of the 15-item Need for Closure Scale (Roets & Van Hiel, 2011b). Regardless, these procedural changes should be noted and considered when discussing the results of the study.

A fourth limitation is that the manipulations may not have been strong enough. The common ingroup manipulation relied only on the addition of five mentions of the United States within a page-long story that otherwise had nothing to do with the athlete's country of origin. Therefore, the ingroup manipulation may not have been strong enough to force the participant to view the athlete as an ingroup member. The time pressure

manipulation may also have been problematic. One explanation for a failure to induce time pressure is that participants are expecting odd situations to arise during their participation in psychological studies and, therefore, assumed that the time pressure speech was part of the study. Another potential explanation is that participants simply did not feel rushed by the janitor scenario, either because it was unbelievable or because they were not concerned about finishing in time. Insignificant results between the Time Pressure and No Pressure conditions suggest that one of these explanations may be true; if so, future research will want to use a stronger time pressure manipulation.

A fifth limitation of the current study has to do with the dependent variables. The current study proposed to investigate the impact of NFC on the Common Ingroup Identity Model's ability to reduce feelings of prejudice towards an outgroup. However, the dependent variables were based upon the evaluation of a single outgroup individual. While the Guilt Questionnaire did ask for participants attitudes towards the athlete, none of the attitude questions were directed towards the athlete's outgroup in general (i.e., "I would expect athletes like Mendoza to be cheaters," or "Just looking at Mendoza, I would think he was a cheater."). The Punishment variable was explicitly a measure of discrimination, not prejudice, because it was concerned with a participant's actions, not their beliefs. Therefore, the amount of strictly prejudicial attitudes that was measured in the current study is debatable.

Pertaining to the post-hoc validation of the 15-item Need for Closure Scale (Roets & Van Hiel, 2011b), a few limitations are worth mentioning. First, no demographic information was collected in the current study for participants in the online version of Part One unless they went on to participate in Part Two. Therefore, demographic

information is essentially unknown for the post-hoc sample. Second, the Conscientiousness and Extraversion scales that were used in the correlational analysis each included only ten items and were originally included in the study to give the participant extra work to do and diffuse the relationship between the scale and the rest of the study. Because of this, and potential differences between the Conscientiousness and Extraversion scales used in the original study, the differences in significance and strength between the current study and the original study are not necessarily indicative of a problem with the shortened version of the scale. Finally, only two scales were used in the correlational analysis. Ideally, the correlational section of the analysis would have included more variables with known links to NFC, as well as the original version of the Need for Closure Scale (Webster & Kruglanski, 1994).

Future Directions

The results of the current study provide researchers looking into NFC, the Common Ingroup Identity Model, or both with some direction. One direction that should be investigated is the impact of dispositional NFC on the Common Ingroup Identity Model in the absence of a situational NFC manipulation. An evaluation of the three-way interaction showed that the creation of time pressure caused scores on the dependent variables to become essentially washed out. When participants in the Time Pressure condition were excluded from the analysis, a significant interaction was found between dispositional NFC and a common ingroup identity. Future research should eliminate the time pressure manipulation and examine the effects of dispositional NFC on the Common Ingroup Identity Model in order to see if the post-hoc results of the current study hold in a dedicated experiment.

Assuming that these post-hoc results are replicated, the adverse effect of evoking a common ingroup identity on high-NFC individuals should be investigated in terms of what is causing the adverse effect. One potential cause is that high NFC participants viewed the common ingroup identity of "American" as having an unspoken racial requisite and that, because he was violating this racial requisite, the athlete's identity as an American was invalid (similar to the findings of Rutchick & Eccleston, 2010). A second explanation could be that the tendency for high NFC individuals to seize and freeze on an answer when they are given one (Kruglanski & Webster, 1996) caused the high NFC participants to seize and freeze on the first paragraph of the article, which stated that the athlete had been stripped of his medal for doping.

Once the cause of the adverse effect is identified, future research could look into methods of counteracting the effect. For example, if the term "American" has racial implications, a different common ingroup should be used when dealing with outgroup members of a racial minority. If the seizing and freezing explanation were found to be true, then journalists attempting to write unbiased pieces could account for this effect by beginning their articles with evidence for both sides of the story. Regardless of what factor is truly causing the adverse effect of a common ingroup identity on high NFC individuals, being able to account for it would improve the effectiveness of the CIIM.

Another direction that should continue to be explored is the link between NFC and various prejudice reduction techniques. The need to find clarity and structure in the environment and through interactions with others can be a powerful motivator (Kruglanski et al., 1993), and, because of its links to prejudiced attitudes (De Zavala et al., 1999), the NFC variable may help researchers explain why an individual would

continue to fall back on stereotypes and prejudice, even after being given evidence that goes against their beliefs. Investigating NFC in relation to prejudice reduction allows researchers to account for this motivational need and tailor their techniques to be more effective when dealing with individuals high in NFC.

The current study found limited support for NFC's impact on the effectiveness of recategorization. However, previous research has found a stronger link between NFC and intergroup contact (Dhont et al., 2011). Therefore, future research may want to investigate NFC in relation to more contact-driven techniques, such as the Parasocial Contact Hypothesis (Schiappa et al., 2005), the jigsaw classroom (Aronson, 2004), and techniques involving the implementation of empathy (e.g., Stephan & Finlay, 1999).

Another direction that future research could follow pertains to the interaction between situational and dispositional NFC. Previous research has largely ignored this interaction, with researchers instead choosing to work with one or the other. While it may not be necessary to account for both types of NFC when using the variable, it is at least worth investigating the interaction between the two concepts. For example, future research could test whether individuals high and low in dispositional NFC respond similarly or differently when placed into a high-NFC situation. The results of the current study suggest that there is no interaction between the two versions of NFC; however, these results were concerned specifically with scores on the guilt and punishment variables. An interaction between situational and dispositional NFC could easily exist outside of the dependent variables that were measured in this study. Therefore, a dedicated experiment into a NFC interaction would be worthwhile.

Future research into the Common Ingroup Identity Model (Gaertner & Dovidio, 2000) may benefit from an exploration of other cognitive, motivational, and personality variables with links to prejudiced attitudes. The model has shown problems in its implementation when applied to real-world situations (e.g., Dach-Gruschow & Hong, 2006). One way that researchers can try to alleviate these problems is by attempting to account for variables that would make an individual more or less likely to respond positively towards the model. For example, if a teacher was able to identify certain personality traits or motivational tendencies that caused a student to be less responsive to the model, they could account for these variables when implementing the model to make it more effective for that specific individual. Therefore, research into relevant individual difference variables could help shape the Common Ingroup Identity Model into a technique with more real-world applicability.

A fifth direction that future research can pursue is attitudes towards athletes who have been accused of doping. There has been some previous research into the topic: one study found that, in recent years, attitudes towards doping in sports have become less rigid, with non-athletes adopting more tolerant opinions on the issue (Vangrunderbeek & Tolleneer, 2010). However, the current study suggests that attitudes towards doping are still quite negative. The mean for the Guilt Questionnaire was nearly five (out of seven) across all conditions, and the average recommended punishment for the athlete was that he be stripped of his medal. While these results do not indicate complete intolerance of doping from all participants, they do suggest that most participants are unsympathetic to the plight of athletes who have been accused of doping and that participants believe they should be punished. Future research should investigate attitudes towards doping in a

general population sample to see whether they have continued to decrease, stagnated, or become more negative. Additionally, with the emergence of Lance Armstrong's doping scandal in national news (Lindsey, 2012), it would be interesting to see if the fact that these allegations are being brought against a national icon is enough to alter reactions towards doping in general and, if so, whether this were a byproduct of recategorization.

Conclusions

The Common Ingroup Identity Model (Gaertner & Dovidio, 2000) is a diverse and useful tool for psychologists in their attempts to reduce prejudice and discrimination. The model's reliance on recategorization, in which the individual is asked to think of outgroup members instead as part of a superordinate ingroup, gives administrators flexibility in their manipulation of the common ingroup identity, and the use of superordinate identities allows for a multiplicity of choices when deciding upon a common ingroup. The model's use of subtle, unobtrusive manipulations, like clothing similarity (Dovidio et al., 1995) or the way in which an outgroup member is referred to (e.g., Stone & Crisp, 2007), should also be attractive to administrators because participants are not likely to exhibit the negative reactions that sometimes accompany the more blatant prejudice reduction techniques (e.g., Legault et al., 2011).

The investigation of cognitive and personality variables in relation to the Common Ingroup Identity Model allows the model to become even more relevant to real world situations. For example, the cognitive evaluation of the terms "American" and "White American" as being analogous to each other (Dach-Gruschow & Hong, 2006) makes the use of the former as a common ingroup identity problematic. The ability of

researchers to account for these variables allows for the creation of a more dynamic real-world technique for reducing prejudice.

The current study looked at the Common Ingroup Identity Model's relationship with NFC, one of these cognitive variables. Results suggest that NFC does not have a direct effect on the model, but that a more complex relationship may exist, in which levels of dispositional NFC causes inverse reactions to a common ingroup identity. These results provide a foundation for further research into NFC's effects on the Common Ingroup Identity Model. The results also extend research into NFC's ties to prejudice reduction in general, suggesting that its impact may be limited to techniques that rely on intergroup contact. While further research is necessary to fully understand NFC's effects on the Common Ingroup Identity Model, the current study provides a direction for future research into the model's relationship with cognitive variables.

LIST OF REFERENCES

Aboud, F.E., & Levy, S.R. (2000). Interventions to reduce prejudice and discrimination in children and adolescents. In S. Oskamp (Ed.), *Reducing Prejudice and Discrimination* (269-293). Mahwah, NJ: Lawrence Erlbaum Associates.

Akrami, N., Ekehammar, B., Claesson, M., & Sonnander, K. (2006). Classical and modern prejudice: Attitudes toward people with intellectual disabilities. *Research in Developmental Disabilities, 27*(6), 605-617.

Allport, G.W. (1945). Catharsis and the reduction of prejudice. *Journal of Social Issues, 1*(3), 3-10.

Allport, G.W. (1954). *The nature of prejudice*. Oxford, England: Addison-Wesley.

Aosved, A.C., Long, P.J., & Voller, E.K. (2009). Measuring sexism, racism, sexual prejudice, ageism, classism, and religious intolerance: The intolerant schema measure. *Journal of Applied Social Psychology, 39*(10), 2321-2354.

Aronson, E. (2004). How the Columbine High School tragedy could have been prevented. *Journal of Individual Psychology, 60*(4), 355-360.

Baunach, D.M., Burgess, E.O., & Muse, C.S. (2010). Southern (dis)comfort: Sexual prejudice and contact with gay men and lesbians in the south. *Sociological Spectrum, 30*(1), 30-64.

Becker, J.C., Enders-Comberg, A., Wagner, U., Christ, O., & Butz, D.A. (2012). Beware of national symbols: How flags can threaten intergroup relations. *Social Psychology, 43*(1), 3-6.

Bergmann, W. (2008). Anti-Semitic attitudes in Europe: A comparative perspective. *Journal of Social Issues, 64*(2), 343-362.

Berryman-Fink, C. (2006). Reducing prejudice on campus: The role of intergroup contact in diversity education. *College Student Journal, 40*(3), 511-516.

Binning, K.R., & Sherman, D.K. (2011). Categorization and communication in the face of prejudice: When describing perceptions changes what is perceived. *Journal of Personality and Social Psychology, 101*(2), 321-336.

Blaine, B., & McElroy, J. (2002). Selling stereotypes: Weight loss informercials, sexism, and weightism. *Sex Roles, 46*(9-10), 351-357.

Blanchard-Fields, F., Hertzog, C., & Horhota, M. (2012). Violate my beliefs? Then you're to blame! Belief content as an explanation for causal attribution biases. *Psychology and Aging, 27*(2), 324-337.

Bratt, C. (2008). The jigsaw classroom under test: No effect on intergroup relations evident. *Journal of Community & Applied Social Psychology, 18*(5), 403-419.

Brewer, M.B. (1991). The social self: On being the same and different at the same time. *Psychological Bulletin, 17*(5), 475-482.

Brewer, M.B. (2007). The importance of being we: Human nature and intergroup relations. *American Psychologist, 62*(8), 728-738.

Brochu, P.M., Gawronski, B., & Esses, V.M. (2011). The integrative prejudice framework and different forms of weight prejudice: An analysis and expansion. *Group Processes & Intergroup Relations, 14*(3), 429-444.

Chirumbolo, A., Livi, S., Mannetti, L., Pierro, A., & Kruglanski, A.W. (2004). Effects of need for closure on creativity in small group interactions. *European Journal of Personality, 18*(4), 265-278.

Corneille, O., Hugenberg, K., & Potter, T. (2007). Applying the attractor field model to social cognition: Perceptual discrimination is facilitated, but memory is impaired for faces displaying evaluatively congruent expressions. *Journal of Personality and Social Psychology, 93*(3), 335-352.

Costall, A. (1999). Dire straits: The divisive legacy of the 1898 Cambridge Anthropological Exposition. *Journal of the History of the Behavioral Sciences, 35*(4), 345-358.

Crisp, R.J., Turner, R.N., & Hewstone, M. (2010). Common ingroups and complex identities: Routes to reducing bias in multiple category contexts. *Group Dynamics: Theory, Research, and Practice, 14*(1), 32-46.

Cunningham, G.B. (2005). The importance of a common in-group identity in ethnically diverse groups. *Group Dynamics: Theory, Research, and Practice, 9*(4), 251-260.

Cunningham, G.B. (2006). The influence of group diversity on intergroup bias following recategorization. *The Journal of Social Psychology, 146*(5), 533-547.

Cunningham, G.B., & Chelladurai, P. (2004). Affective reactions to cross-functional teams: The impact of size, relative performance, and common in-group identity. *Group Dynamics: Theory, Research, and Practice, 8*(2), 83-97.

Czopp, A.M., Monteith, M.J., & Mark, A.Y. (2006). Standing up for a change: Reducing bias through interpersonal confrontation. *Journal of Personality and Social Psychology, 90*(5), 784-803.

Dach-Gruschow, K., & Hong, Y. (2006). The racial divide in response to the aftermath of Katrina: A boundary condition for Common Ingroup Identity Model. *Analyses of Social Issues and Public Policy, 6*(1), 125-141.

De Grada, E., Kruglanski, A.W., Mannetti, L, & Pierro, A. (1999). Motivation cognition and group interaction: Need for closure affects the contents and processes of collective negotiations. *Journal of Experimental Social Psychology, 35*(4), 346-365.

De Zavala, A.C., Cislak, A., & Wesolowska, E. (2010). Political conservatism, need for cognitive closure, and intergroup hositility. *Political Psychology, 31*(4), 521-541.

De Zavala, A.C., Federico, C.M., Cislak, A., & Sigger, J. (2008). Need for closure and competition in intergroup conflicts: Experimental evidence for the mitigating effect of accessible conflict-schemas. *European Journal of Social Psychology, 38*(1), 84-105.

Deal, M. (2007). Aversive disablism: Subtle prejudice toward disabled people. *Disability & Society, 22*(1), 93-107.

Devine, P.G., Plant, E.A., & Buswell, B.N. (2000). Breaking the prejudice habit: Progress and obstacles. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 185-208). Mahwah, NJ: Lawrence Erlbaum Associates.

Dhont, K., Roets, A., & Van Hiel, A. (2011). Opening closed minds: The combined effects of intergroup contact and need for closure on prejudice. *Personality and Social Psychology Bulletin, 37*(4), 514-528.

Dijksterhuis, A., van Knippenberg, A., Kruglanski, A.W., & Schaper, C. (1996). Motivated social cognition: Need for closure effects on memory and judgment. *Journal of Experimental Social Psychology, 32*(3), 254-270.

Dovidio, J.F., Gaertner, S.L., Isen, A.M., & Lowrance, R. (1995). Group representations and intergroup bias: Positive affect, similarity, and group size. *Personality and Social Psychology Bulletin, 21*(8), 856-865.

Dovidio, J.F., Gaertner, S.L., Validzic, A., Matoka, K., Johnson, B., & Frazier, S. (1997). Extending the benefits of recategorization: Evaluations, self-disclosure, and helping. *Journal of Experimental Social Psychology, 33*(4), 401-420.

Dovidio, J.F., Kawakami, K., & Gaertner, S.L. (2000). Reducing contemporary prejudice: Combating explicit and implicit bias at the individual and intergroup level. In S. Oksamp (Ed.), *Reducing prejudice and discrimination* (pp. 137-163). Mahwah, NJ: Lawrence Erlbaum Associates.

Dovidio, J.F., ten Vergert, M., Stewart, T.L., Gaertner, S.L., Johnson, J.D., Esses, V.M., & … Pearson, A.R. (2004). Perspective and prejudice: Antecedents and mediating mechanisms. *Personality and Social Psychology Bulletin, 30*(12), 1537-1549.

Eckes, T., Trautner, H.M., & Behrendt, R. (2005). Gender subgroups and intergroup perception: Adolescents' views of own-gender and other-gender groups. *The Journal of Social Psychology, 145*(1), 85-111.

Ellemers, N., & Barreto, M. (2009). Collective action in modern times: How modern expressions of prejudice prevent collective action. *Journal of Social Issues, 65*(4), 749-768.

Escandell, X., & Ceobanu, A.M. (2009). When contact with immigrants matters: Threat, interethnic attitudes and foreigner exclusionism in Spain's *Comunidades Autonomas*. *Ethnic and Racial Studies, 32*(1), 44-69.

Fiske, S.T. (2000). Interdependence and the reduction of prejudice. In S. Oksamp (Ed.), *Reducing prejudice and discrimination* (pp. 115-135). Mahwah, NJ: Lawrence Erlbaum Associates.

Flynn, F.J., Reagans, R.E., & Guillory, L. (2010). Do you two know each other? Transitivity, homophily, and the need for (network) closure. *Journal of Personality and Social Psychology, 99*(5), 855-869.

Gaertner, S.L., & Dovidio, J.F. (2000). *Reducing intergroup bias: The Common Ingroup Identity Model*. Philadelphia, PA: Psychology Press.

Gaertner, S.L., & Dovidio, J.F. (2005). Understanding and addressing contemporary racism: From aversive racism to the Common Ingroup Identity Model. *Journal of Social Issues, 61*(3), 615-639.

Gaertner, S.L., Dovidio, J.F., Rust, M.C., Nier, J.A., Banker, B.S., Ward, C.M, & … Houlette, M. (1999). Reducing intergroup bias: Elements of intergroup cooperation. *Journal of Personality and Social Psychology, 76*(3), 388-402.

Gaertner, S.L., Rust, M.C., Dovidio, J.F., Bachman, B.A., & Anastasio, P.A. (1994). The contact hypothesis: The role of a common ingroup identity on reducing intergroup bias. *Small Group Research, 25*(2), 224-249.

Goldberg, L.R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment, 4*(1), 26-42.

Gribbins, T., & Vandenberg, B. (2011). Religious fundamentalism, the need for cognitive closure, and helping. *The International Journal for the Psychology of Religion, 21*(2), 106-114.

Hale, N.M. (1998). Effects of age and interpersonal contact on stereotyping of the elderly. *Current Psychological Research & Reviews, 17*(1), 28-47.

Henderson-King, E., Henderson-King, D., Zhermer, N., Posokhova, S., & Chiker, V. (1997). In-group favoritism and perceived similarity: A look at Russians' perceptions in the post-Soviet era. *Personality and Social Psychology Bulletin, 23*(10), 1013-1021.

Hirose, Y., Taresawa, Y., & Okuda, T. (2005). Collective action and subordinate group identity in a simulated society game. *Japanese Psychological Research, 47*(1), 12-21.

Hogg, M.A., & Williams, K.D. (2000). From 'I' to 'we': Social identity and the collective self. *Group Dynamics: Theory, Research, and Practice, 4*(1), 81-97.

Houghton, D.C., & Grewel, R. (2000). Please, let's get an answer – any answer: Need for consumer cognitive closure. *Psychology & Marketing, 17*(11), 911-934.

Houlette, M.A., Gaertner, S.L., Johnson, K.M., Banker, B.S., Riek, B.M., & Dovidio, J.F. (2004). Developing a more inclusive social identity: An elementary school intervention. *Journal of Social Issues, 60*(1), 35-55.

Huang, J.Y., Sedlovskaya, A., Ackerman, J.M., & Bargh, J.A. (2011). Immunizing against prejudice: Effects of disease protection on attitudes toward out-groups. *Psychological Science, 22*(12), 1550-1556.

Jensen, G., Cismaru, M., Lavack, A., & Cismaru, R. (2010). Examining prejudice-reduction theories in anti-racism initiatives. *International Journal of Nonprofit and Volunteer Sector Marketing, 15*(2), 181-198.

Johnson, D.W., & Johnson, R.T. (2000). The three C's of reducing prejudice and discrimination. In S. Oskamp (Ed.), *Reducing Prejudice and Discrimination* (239-268). Mahwah, NJ: Lawrence Erlbaum Associates.

Kessler, T., & Mummendey, A. (2001). Is there any scapegoat around? Determinants of intergroup conflicts at different categorization levels. *Journal of Personality and Social Psychology, 81*(6), 1090-1102.

Kinder, D.R., & Sears, D.O. (1981). Prejudice and politics: Symbolic racism versus racial threats to the good life. *Journal of Personality and Social Psychology, 40*(3), 414-431.

Kruglanski, A.W., & Webster, D.M. (1996). Motivated closing of the mind: "Seizing" and "freezing." *Psychological Review, 103*(2), 263-283.

Kruglanski, A.W., Webster, D.M., & Klem, A. (1993). Motivated resistance and openness to persuasion in the presence or absence of prior information. *Journal of Personality and Social Psychology, 65*(5), 861-876.

Legault, L., Gutsell, J.N., & Inzlicht, M. (2011). Ironic effects of antiprejudice messages: How motivational interventions can reduce (but also increase) prejudice. *Psychological Science, 22*(12), 1472-1477.

Levin, S., Sinclair, S., Sidanius, J., & Van Laar, C. (2009). Ethnic and university identities across the college years: A common in-group identity perspective. *Journal of Social Issues, 65*(2), 287-306.

Lindsey, J. (2012, November 21). Why hasn't Lance Armstrong apologized? *Bicycling*. Retrieved from http://bicycling.com/blogs/boulderreport/2012/11/21/why-hasnt-lance-armstrong-apologized/.

Liu, J.J. (2010). Contact and identity: The experience of 'China goods' in a Ghanaian marketplace. *Journal of Community & Applied Social Psychology, 20*(3), 184-201.

Lloyd, K., & Robinson, G. (2011). Intimate mixing - bridging the gap? Catholic-Protestant relationships in Northern Ireland. *Ethnic and Racial Studies, 34*(12), 2134-2152.

Maass, A., Ceccarelli, R., & Rudin, S. (1996). Linguistic intergroup bias: Evidence for in-group-protective motivation. *Journal of Personality and Social Psychology, 71*(3), 512-526.

Marcu, A., Lyons, E., & Hegarty, P. (2007). Dilemmatic human-animal boundaries in Britain and Romania: Post-materialist and materialist dehumanization. *British Journal of Social Psychology, 46*(4), 875-893.

McConahay, J.B. (1983). Modern racism and modern discrimination: The effects of race, racial attitudes, and context on simulated hiring decisions. *Personality and Social Psychology Bulletin, 9*(4), 551-558.

McGuigan, W.M., & Scholl, C. (2007). The effect of contact on attitudes toward Old Order Amish. *Journal of Applied Social Psychology, 37*(11), 2642-2659.

Molina, L.E., & Wittig, M.A. (2006). Relative importance of contact conditions in explaining prejudice reduction in a classroom context: Separate and equal? *Journal of Social Issues, 62*(3), 489-509.

Morrison, T.G., Kenny, P., & Harrington, A. (2005). Modern prejudice toward gay men and lesbian women: Assessing the viability of a measure of modern homonegative attitudes within an Irish context. *Genetic, Social, and General Psychology Monographs, 131*(3), 219-250.

Mottola, G.R., Bachman, B.A., Gaertner, S.L, & Dovidio, J.F. (1997). How groups merge: The effects of merger integration patterns on anticipated commitment to the merged organization. *Journal of Applied Social Psychology, 27*(15), 1335-1358.

Nadler, A., Harpaz-Gorodeisky, G., & Ben-David, Y. (2009). Defensive helping: Threat to group identity, ingroup identification, status stability, and common group identity as determinants of intergroup help-giving. *Journal of Personality and Social Psychology, 97*(5), 823-834.

Nier, J.A., Gaertner, S.L., Dovidio, J.F., Banker, B.S., Ward, C.M., & Rust, M.C. (2001). Changing interracial evaluations and behavior: The effects of a common group identity. *Group Processes & Intergroup Relations, 4*(4), 299-316.

Olson, M.A., & Fazio, R.H. (2006). Reducing automatically activated racial prejudice through implicit evaluative conditioning. *Personality and Social Psychology Bulletin, 32*(4), 421-433.

Onraet, E., Van Hiel, A., Roets, A., & Cornelis, I. (2011). The closed mind: 'Experience' and 'cognition' aspects of openness to experience and need for closure as psychological bases for right-wing attitudes. *European Journal of Personality, 25*(3), 184-197.

Orehek, E., Fishman, S., Dechesne, M., Doosje, B., Kruglanski, A.W., Cole, A.P., & … Jackson, T. (2010). Need for closure and the social response to terrorism. *Basic and Applied Social Psychology, 32*(4), 279-290.

Paluck, E.L., & Green, D.P. (2009). Prejudice reduction: What works? A review and assessment of research and practice. *Annual Review of Psychology, 60*, 339-367.

Perdue, C.W., Dovidio, J.F., Gurtman, M.B., & Tyler, R.B. (1990). Us and them: Social categorization and the process of intergroup bias. *Journal of Personality and Social Psychology, 59*(3), 475-486.

Pettigrew, T.F. (1998). Intergroup contact theory. *Annual Review of Psychology, 49*, 65-85.

Pettigrew, T.F., & Tropp, L.R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*(5), 751-783.

Pickett, C.L., Bonner, B.L., & Coleman, J.M. (2002). Motivated self-stereotyping: Heightened assimilation and differentiation needs result in increased levels of positive and negative self-stereotyping. *Journal of Personality and Social Psychology, 82*(4), 543-562.

Popan, J.R., Kenworthy, J.B., Frame, M.C., Lyons, P.A., & Snuggs, S.J. (2010). Political groups in contact: The role of attributions for outgroup attitudes in reducing antipathy. *European Journal of Social Psychology, 40*(1), 86-101.

Richards, G. (2010). *Putting psychology in its place: Critical historical perspectives* (3rd ed.). New York, NY: Routledge.

Riek, B.M., Mania, E.W., Gaertner, S.L., McDonald, S.A., & Lamoreaux, M.J. (2010). Does a common ingroup identity reduce intergroup threat? *Group Processes & Intergroup Relations, 13*(4), 403-423.

Roets, A., & Van Hiel, A. (2011a). Allport's prejudiced personality today: Need for closure as the motivated cognitive basis of prejudice. *Current Directions in Psychological Science, 20*(6), 349-354.

Roets, A., & Van Hiel, A. (2011b). Item selection and validation of a brief, 15-item version of the Need for Closure Scale. *Personality and Individual Differences, 50*(1), 90-94.

Roets, A., Van Hiel, A., & Dhont, K. (2012). Is sexism a gender issue? A motivation social cognition perspective on men's and women's sexist attitudes toward own and other gender. *European Journal of Personality, 26*(3), 350-359.

Romanes, G. (1887). Mental differences between men and women. In J.B. Taylor & S. Shuttleworth (Eds.), *Embodied selves: An anthology of psychological texts 1830-1890* (pp. 384-388). Oxford, England: Clarendon Press.

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.

Rutchick, A.M., & Eccleston, C.P. (2010). Ironic effects of invoking common ingroup identity. *Basic and Applied Social Psychology, 32*(2), 109-117.

Schiappa, E., Gregg, P.B., & Hewes, D.E. (2005). The parasocial contact hypothesis. *Communication Monographs, 72*(1), 92-115.

Sigelman, L., & Sigelman, C.K. (1982). Sexism, racism, and ageism in voting behavior: An experimental analysis. *Social Psychology Quarterly, 45*(4), 263-269.

Simmons, J.P., Nelson, L.D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science, 22*(11), 1359-1366.

Sindic, D., & Reicher, S.D. (2009). 'Our way of life is worth defending': Testing a model of attitudes towards superordinate group membership through a study of Scots' attitudes towards Britain. *European Journal of Social Psychology, 39*(1), 114-129.

Smith, L., Foley, P.F., & Chaney, M.P. (2008). Addressing classism, ableism, and heterosexism in counselor education. *Journal of Counseling & Development, 86*(3), 303-309.

Sommers, S.R., & Ellsworth, P.C. (2000). Race in the courtroom: Perceptions of guilt and dispositional attributions. *Personality and Social Psychology Bulletin, 26*(11), 1367-1379.

Spencer, H. (1861). Elements of feminine attraction. In J.B. Taylor & S. Shuttleworth (Eds.), *Embodied selves: An anthology of psychological texts 1830-1890* (pp. 373-374). Oxford, England: Clarendon Press.

Stephan, W.G., & Finlay, K. (1999). The role of empathy in improving intergroup relations. *Journal of Social Issues, 55*(4), 729-743.

Stone, C.H., & Crisp, R.J. (2007). Superordinate and subgroup identification as predictors of intergroup evaluation in common ingroup contexts. *Group Processes & Intergroup Relations, 10*(4), 493-513.

Swim, J.K., Aikin, K.J., Hall, W.S., & Hunter, B.A. (1995). Sexism and racism: Old-fashioned and modern prejudices. *Journal of Personality and Social Psychology, 68*(2), 199-214.

Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In W.G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA: Brooks/Cole.

Taris, T.W. (2000). Dispositional need for cognitive closure and self-enhancing beliefs. *The Journal of Social Psychology, 140*(1), 35-50.

Van Hiel, A., & Mervielde, I. (2003). The need for closure and the spontaneous use of complex and simple cognitive structures. *The Journal of Social Psychology, 143*(5), 559-568.

Van Hiel, A., Pandelaere, M., & Duriez, B. (2004). The impact of need for closure on conservative beliefs and racism: Differential mediation by authoritarian submission and authoritarian dominance. *Personality and Social Psychology Bulletin, 30*(7), 824-837.

Vangrunderbeek, H., & Tolleneer, J. (2010). Student attitudes towards doping in sport: Shifting from repression to tolerance? *International Review for the Sociology of Sport, 46*(3), 346-357.

Vignoles, V.L., & Moncaster, N.J. (2007). Identity motives and in-group favouritism: A new approach to individual differences in intergroup differentiation. *British Journal of Social Psychology, 46*(1), 91-113.

Webster, D.M., & Kruglanski, A.W. (1994). Individual differences in need for cognitive closure. *Journal of Personality and Social Psychology, 67*(6), 1049-1062.

Wiersema, D.V., van der Schalk, J., & van Kleef, G.A. (2011). Who's afraid of red, yellow, and blue? Need for cognitive closure predicts aesthetic preferences. *Psychology of Aesthetics, Creativity, and the Arts, 6*(2), 168-174.

Woodworth, R.S. (1910). Racial differences in mental traits. *Science, 31*, 171-186.

APPENDIX A:

Need for Closure Scale

Read the following statements and choose how much you agree or disagree with each based on your beliefs and opinions about yourself. Please type the number corresponding to your agreement with each statement, with 1 meaning you strongly disagree with the statement and 5 meaning you strongly agree with the statement.

1 – strongly disagree
2 – somewhat disagree
3 – neutral
4 – somewhat agree
5 – strongly agree

1. I don't like situations that are uncertain. _____

2. I don't like questions which could be answered in many different ways. _____

3. I find that a well-ordered life with regular hours suits my temperament. _____

4. I feel uncomfortable when I don't understand the reason why an event occurred in my life. _____

5. I feel irritated when one person disagrees with what everyone else in a group believes. _____

6. I don't like to go into a situation without knowing what I can expect from it. _____

7. When I have made a decision, I feel relieved. _____

8. When I am confronted with a problem, I'm dying to reach a solution very quickly. _____

9. I would quickly become impatient and irritated if I would not find a solution to a problem immediately. _____

10. I don't like to be with people who are capable of unexpected actions. _____

11. I dislike it when a person's statement could mean many different things. _____

12. I find that establishing a consistent routine enables me to enjoy life more. ____

13. I enjoy having a clear and structured mode of life. _____

14. I do not usually consult many different opinions before forming my own. ____

15. I dislike unpredictable situations. _____

APPENDIX B:

Self-Esteem Scale

Read the following statements and choose how much you agree or disagree with each based on your beliefs and opinions about yourself. Please type the number corresponding to your agreement with each statement, with 1 meaning you strongly disagree with the statement and 5 meaning you strongly agree with the statement.

1 – strongly disagree
2 – somewhat disagree
3 – neutral
4 – somewhat agree
5 – strongly agree

1. On the whole, I am satisfied with myself. _____

2. At times, I think I am no good at all. _____

3. I feel that I have a number of good qualities. _____

4. I am able to do things as well as most other people. _____

5. I feel I do not have much to be proud of. _____

6. I certainly feel useless at times. _____

7. I feel that I'm a person of worth, at least on an equal plane with others. _____

8. I wish I could have more respect for myself. _____

9. All in all, I am inclined to feel that I am a failure. _____

10. I take a positive attitude toward myself. _____

APPENDIX C:

Conscientiousness Scale

Read the following statements and choose how much you agree or disagree with each based on your beliefs and opinions about yourself. Please type the number corresponding to your agreement with each statement, with 1 meaning you strongly disagree with the statement and 5 meaning you strongly agree with the statement.

1 – strongly disagree
2 – somewhat disagree
3 – neutral
4 – somewhat agree
5 – strongly agree

1. I am always prepared. _____

2. I leave my belongings around. _____

3. I pay attention to details. _____

4. I get chores done right away. _____

5. I like order. _____

6. I make a mess of things. _____

7. I follow a schedule. _____

8. I often forget to put things back in their proper place. _____

9. I am exacting in my work. _____

10. I shirk my duties. _____

APPENDIX D:

Extraversion Scale

Read the following statements and choose how much you agree or disagree with each based on your beliefs and opinions about yourself. Please type the number corresponding to your agreement with each statement, with 1 meaning you strongly disagree with the statement and 5 meaning you strongly agree with the statement.

1 – strongly disagree
2 – somewhat disagree
3 – neutral
4 – somewhat agree
5 – strongly agree

1. I don't talk a lot. _____

2. I feel comfortable around people. _____

3. I keep in the background. _____

4. I don't mind being the center of attention. _____

5. I am the life of the party. _____

6. I am quiet around strangers. _____

7. I don't like to draw attention to myself. _____

8. I start conversations. _____

9. I talk to a lot of different people at parties. _____

10. I have little to say. _____

APPENDIX E:

Guilt Questionnaire

The next few questions pertain to the doping case you have just read about in the news article. While we understand that other information is necessary to assess the guilt of the athlete, we would like you to answer a few questions about the athlete's guilt based on the information you have been provided. Remember that your responses are anonymous, and try to answer honestly.

Please circle the number corresponding to your choice.

1. The results of the tests conducted by the IOC are probably correct.

1	2	3	4	5	6	7
Strongly Disagree			Not Sure			Strongly Agree

2. I believe Mendoza when he says that he is clueless as to the test results.

1	2	3	4	5	6	7
Strongly Disagree			Not Sure			Strongly Agree

3. I believe that Mendoza is guilty of doping.

1	2	3	4	5	6	7
Strongly Disagree			Not Sure			Strongly Agree

4. Mendoza should have been stripped of his medal.

1	2	3	4	5	6	7
Strongly Disagree			Not Sure			Strongly Agree

5. Please indicate with a checkmark which punishment, if any, you believe the athlete deserves. Select only one.

___ No punishment: I believe Mendoza should have retained his medal.
___ He should be fined, but should be allowed to keep his medal.
___ He should be stripped of his medal.
___ He should receive a substantial fine from the IAAF.
___ He should receive a two year ban from all international shot put competition.
___ He should be banned for life from the Olympics.
___ He should be banned for life from all international shot put competition.

APPENDIX F:

Big-Five Personality Test

Please use this list of common human traits to describe yourself as accurately as possible. Describe yourself as you see yourself at the present time, not as you wish to be in the future. Describe yourself as you are generally or typically, as compared with other persons you know of the same sex and of roughly your same age.

Before each trait, please write a number indicating how accurately that trait describes you, using the following rating scale:

1 = extremely inaccurate		6 = slightly accurate
2 = very inaccurate	5 = neither	7 = quite accurate
3 = quite inaccurate		8 = very accurate
4 = slightly inaccurate		9 = extremely accurate

Active	_____
Agreeable	_____
Anxious	_____
Artistic	_____
Assertive	_____
Bashful	_____
Bold	_____
Bright	_____
Careful	_____
Careless	_____
Cold	_____
Complex	_____
Conscientious	_____
Considerate	_____
Cooperative	_____
Creative	_____
Daring	_____
Deep	_____
Demanding	_____
Disorganized	_____
Distrustful	_____
Efficient	_____
Emotional	_____
Energetic	_____
Envious	_____
Extraverted	_____
Fearful	_____
Fretful	_____
Generous	_____
Haphazard	_____
Harsh	_____
Helpful	_____

High-strung	_____
Imaginative	_____
Imperceptive	_____
Imperturbable	_____
Impractical	_____
Inconsistent	_____
Inefficient	_____
Inhibited	_____
Innovative	_____
Insecure	_____
Intellectual	_____
Introspective	_____
Introverted	_____
Irritable	_____
Jealous	_____
Kind	_____
Moody	_____
Neat	_____
Negligent	_____
Nervous	_____
Organized	_____
Philosophical	_____
Pleasant	_____
Practical	_____
Prompt	_____
Quaint	_____
Relaxed	_____
Reserved	_____
Rude	_____
Self-pitying	_____
Selfish	_____
Shallow	_____
Shy	_____
Simple	_____
Sloppy	_____
Steady	_____
Sympathetic	_____
Systematic	_____
Talkative	_____
Temperamental	_____
Thorough	_____
Timid	_____
Touchy	_____
Trustful	_____
Uncooperative	_____

Uncreative	_____
Unemotional	_____
Unexcitable	_____
Unimaginative	_____
Unintelligent	_____
Unkind	_____
Unrestrained	_____
Unsophisticated	_____
Unsympathetic	_____
Verbal	_____
Vigorous	_____
Warm	_____
Withdrawn	_____

APPENDIX G:

Part One Consent Form

Researcher's Name: Bradlee Gamblin

Title: Personality and the Olympics (Part One)

I am a graduate student at Eastern Kentucky University. I am conducting a study looking at psychological measures in relation to the 2012 Olympics. In part one, you will be asked to fill out four short personality surveys. Part one should take no longer than 15 minutes.

Your participation is voluntary and you have the right to refuse to answer any question. You may also withdraw from the study at any time without giving prior notice and without penalty. Your responses are completely anonymous.

After completing part one of the study, you will be given a debriefing form explaining the purpose of the surveys you have completed. You will be given a full debriefing explaining the purpose of the entire study after completing part two. If you still wish to participate in the study, we will now begin.

APPENDIX H:

Part One Debriefing Form

Personality and the Olympics, Part One

Part one of this study was concerned with the levels people score on personality measures. Specifically, in part one of this study, you completed the Need for Closure Scale (Roets & Van Hiel, 2011), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), and the Conscientiousness and Extraversion subscales of the Big-Five Personality Test (Goldberg, 1992). Need for closure refers to the motivational need for individuals to find clarity, definition, and structure in their environments and their interactions with others. Along with Conscientiousness and Extraversion, the other three factors in the Big-Five are Openness to experience, Agreeableness, and Neuroticism.

Thank you for participating in this study. Psychological research is not possible without the cooperation of participants like you. If you are interested in research related to these questionnaires or would like to know your scores on the measures, feel free to contact the researcher listed below.

Bradlee Gamblin
bradlee_gamblin@mymail.eku.edu

References

Goldberg, L.R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment, 4*(1), 26-42.

Roets, A., & Van Hiel, A. (2011). Item selection and validation of a brief, 15-item version of the Need for Closure Scale. *Personality and Individual Differences, 50*(1), 90-94.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

APPENDIX I:

Part Two Consent Form

Researcher's Name: Bradlee Gamblin

Title: Personality and the Olympics (Part Two)

I am a graduate student at Eastern Kentucky University. I am conducting a study in which you will be asked to read an article about the 2012 Summer Olympics and give your opinions on a few questions. This study should take no longer than 30 minutes.

Your participation is voluntary and you have the right to refuse to answer any question. You may also withdraw from the study at any time without giving prior notice and without penalty; however, you will not be given credit for your participation. You responses are completely anonymous.

After completing the study, you will be given a debriefing form explaining the purpose of this study. If you still wish to participate in this study, we will begin.

APPENDIX J:

Newspaper Article, Ingroup Version

Just hours after the close of the Olympics, United States shot putter Claudio Mendoza was stripped of his gold Monday in the first case of an athlete losing a medal for doping at the 2012 London Games.

The International Olympic Committee said Mendoza, a former world champion, tested positive for steroids both before and after winning the shot put last week for his first Olympic gold.

"Catching cheats like this sends a message to all those who dope that we will catch them," IOC spokesman Mark Adams said.

A hearing was held Sunday, a few hours before the closing ceremony, attended by three United States team officials. They told the IOC that Mendoza had been tested in the United States on July 25, July 26 and Aug. 1, and the results were negative. The athlete arrived in London on Aug. 4 and went straight to the athlete village.

Mendoza told the American media that he had done nothing wrong.

"I do not understand where it could come from," he told BBC. "I'm looking like an idiot to take this in heading for the Games and knowing that it is so easy to be tested. Nonsense. I'm being tested every month, every week.

"I hope for the best. The most important thing for me is to clear my reputation. I've been in the sport for so many years and have never faced any claims. And now at the major event and after the gold medal? I do not understand it."

Track and field's governing body, the IAAF, will consider further action against Mendoza, who could face larger consequences within the sport ranging from a multi-thousand dollar fine to a lifetime ban.

(Pictured: American shot putter Claudio Mendoza accepting his gold medal)

Figure 4. “Claudio Mendoza” (Athlete Used For Ingroup News Article).

APPENDIX K:

Newspaper Article, Outgroup Version

Just hours after the close of the Olympics, shot putter Claudio Mendoza was stripped of his gold Monday in the first case of an athlete losing a medal for doping at the 2012 London Games.

The International Olympic Committee said Mendoza, a former world champion, tested positive for steroids both before and after winning the shot put last week for his first Olympic gold.

”Catching cheats like this sends a message to all those who dope that we will catch them,” IOC spokesman Mark Adams said.

A hearing was held Sunday, a few hours before the closing ceremony, attended by three team officials. They told the IOC that Mendoza had been tested on July 25, July 26 and Aug. 1, and the results were negative. The athlete arrived in London on Aug. 4 and went straight to the athlete village.

Mendoza told the media that he had done nothing wrong.

”I do not understand where it could come from,” he told BBC. “I’m looking like an idiot to take this in heading for the Games and knowing that it is so easy to be tested. Nonsense. I’m being tested every month, every week.

”I hope for the best. The most important thing for me is to clear my reputation. I’ve been in the sport for so many years and have never faced any claims. And now at the major event and after the gold medal? I do not understand it.”

Track and field’s governing body, the IAAF, will consider further action against Mendoza, who could face larger consequences within the sport ranging from a multi-thousand dollar fine to a lifetime ban.

(Pictured: Shot putter Mendoza accepting his gold medal)

Figure 5. “Claudio Mendoza” (Athlete Used for Outgroup News Article).

APPENDIX L:

Summary Sheet

Summary Sheet

Please summarize the article that you have just read. Include as much detail as you can, but do not re-write the article word for word. You will have five minutes to complete your summary.

_____

APPENDIX M:

Demographics Sheet

Demographics Sheet

Please indicate your…

Race:
_____ Asian
_____ African-American
_____ Caucasian
_____ Hispanic
_____ Other (Please specify): _____

Gender: _____ **Age: _____**

APPENDIX N:

Part Two Debriefing Form

The Moderating Effects of Need for Closure on the Common Ingroup Identity Model

This study was designed to test the relationship between need for closure, a cognitive need to find quick, concrete answers (Kruglanski, Webster, & Klem, 1993), and the Common Ingroup Identity Model, a technique for reducing prejudice by inducing members of different groups to think of themselves as one, all-inclusive group (Gaertner & Dovidio, 2000). The present study is looking at the moderating effects of need for closure on the Common Ingroup Identity Model. Previous research has shown that need for closure moderates the effectiveness of intergroup contact, a separate prejudice reduction technique (Dhont, Roets, & Van Hiel, 2011).

In this study, participants were randomly assigned to both an ingroup condition and a closure condition. Participants read a news article describing a simulated drug doping case from the 2012 Summer Olympics. Some participants were told that the athlete was from the United States; others were given no country designation. Both groups were then asked to complete a questionnaire concerning the guilt of the athlete in question. Participants in the high need for closure condition were given time pressure by being told they needed to finish the study in a hurry, while participants in the low need for closure condition were not given this instruction. I predict that participants in the high need for closure condition will be more responsive to the Common Ingroup Identity Model than participants in the low need for closure condition. I also predict that this will be moderated by dispositional need for closure, measured by the Need for Closure Scale (Roets & Van Hiel, 2011), which participants filled out online.

Thank you for participating in my study. Psychological research is not possible without the cooperation of participants like you. If you are interested in research on reducing prejudice, feel free to contact me or consult the references listed below.

Bradlee Gamblin
bradlee_gamblin@mymail.eku.edu

References

Dhont, K., Roets, A., & Van Hiel, A. (2011). Opening closed minds: The combined effects of intergroup contact and need for closure on prejudice. *Personality and Social Psychology Bulletin, 37*(4), 514-528.

Gaertner, S.L., & Dovidio, J.F. (2000). *Reducing intergroup bias: The Common Ingroup Identity Model*. Philadelphia, PA: Psychology Press.

Kruglanski, A.W., Webster, D.M., & Klem, A. (1993). Motivated resistance and openness to persuasion in the presence or absence of prior information. *Journal of Personality and Social Psychology, 65*(5), 861-876.

Roets, A., & Van Hiel, A. (2011b). Item selection and validation of a brief, 15-item version of the Need for Closure Scale. *Personality and Individual Differences, 50*(1), 90-94.

APPENDIX O:

Online Consent Form

Researcher's Name: Bradlee Gamblin

Title: College Student Opinions, Attitudes, and Personalities

I am a graduate student at Eastern Kentucky University conducting a study for my graduate thesis. In this study, you will complete four short personality surveys which will be used in my thesis project. Your participation will take no longer than 30 minutes.

Your participation is voluntary and you have the right to refuse to answer any question. You may also withdraw from the study at any time without giving prior notice and without penalty. Your responses are completely anonymous.

After completing the study, you will be given a debriefing form explaining the purpose of the surveys you have completed. If you still wish to participate in this study, we will now begin.

APPENDIX P:

Online Debriefing Form

College Student Opinions, Attitudes, and Personalities

This study was concerned with the levels people score on personality measures. Specifically, you completed the Need for Closure Scale (Roets & Van Hiel, 2011), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), and the Conscientiousness and Extraversion subscales of the Big-Five Personality Test (Goldberg, 1992). Need for closure refers to the motivational need for individuals to find clarity, definition, and structure in their environments and their interactions with others. Along with Conscientiousness and Extraversion, the other three factors in the Big-Five are Openness to experience, Agreeableness, and Neuroticism.

Thank you for participating in this study. Psychological research is not possible without the cooperation of participants like you. If you are interested in research related to these questionnaires or would like to know your scores on the measures, feel free to contact the researcher listed below.

Bradlee Gamblin
bradlee_gamblin@mymail.eku.edu

References

Goldberg, L.R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment, 4*(1), 26-42.

Roets, A., & Van Hiel, A. (2011). Item selection and validation of a brief, 15-item version of the Need for Closure Scale. *Personality and Individual Differences, 50*(1), 90-94.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

APPENDIX Q:

In-Person Consent Form

Researcher's Name: Bradlee Gamblin

Title: Psychology at the Olympic Games

I am a graduate student at Eastern Kentucky University. I am conducting a study looking at psychology in relation to the 2012 London Olympics. In this study, you will be asked to read an article about the 2012 Summer Olympics and give your opinions on a few questions. This study should take no longer than 30 minutes.

Your participation is voluntary and you have the right to refuse to answer any question. You may also withdraw from the study at any time without giving prior notice and without penalty. You responses are completely anonymous.

After completing the study, you will be given a debriefing form explaining the purpose of the study. If you still wish to participate in the study, we will begin.

APPENDIX R:

In-Person Debriefing Form

The Moderating Effects of Need for Closure on the Common Ingroup Identity Model

This study was designed to test the relationship between need for closure, a cognitive need to find quick, concrete answers (Kruglanski, Webster, & Klem, 1993), and the Common Ingroup Identity Model, a technique for reducing prejudice by inducing members of different groups to think of themselves as one, all-inclusive group (Gaertner & Dovidio, 2000). The present study is looking at the moderating effects of need for closure on the Common Ingroup Identity Model. Previous research has shown that need for closure moderates the effectiveness of intergroup contact, a separate prejudice reduction technique (Dhont, Roets, & Van Hiel, 2011).

In this study, participants were randomly assigned to both an ingroup condition and a closure condition. Participants read a news article describing a simulated drug doping case from the 2012 Summer Olympics. Some participants were told that the athlete was from the United States; others were given no country designation. Both groups were then asked to complete a questionnaire concerning the guilt of the athlete in question. Participants in the high need for closure condition were given time pressure by being told they needed to finish the study in a hurry, while participants in the low need for closure condition were not given this instruction. I predict that participants in the high need for closure condition will be more responsive to the Common Ingroup Identity Model than participants in the low need for closure condition. I also predict that this will be moderated by dispositional need for closure, measured by the Need for Closure Scale (Roets & Van Hiel, 2011), which participants filled out online at an earlier date.

Thank you for participating in my study. Psychological research is not possible without the cooperation of participants like you. If you are interested in research on reducing prejudice, feel free to contact me or consult the references listed below.

Bradlee Gamblin
bradlee_gamblin@mymail.eku.edu

References

Dhont, K., Roets, A., & Van Hiel, A. (2011). Opening closed minds: The combined effects of intergroup contact and need for closure on prejudice. *Personality and Social Psychology Bulletin, 37*(4), 514-528.

Gaertner, S.L., & Dovidio, J.F. (2000). *Reducing intergroup bias: The Common Ingroup Identity Model*. Philadelphia, PA: Psychology Press.

Kruglanski, A.W., Webster, D.M., & Klem, A. (1993). Motivated resistance and openness to persuasion in the presence or absence of prior information. *Journal of Personality and Social Psychology, 65*(5), 861-876.

Roets, A., & Van Hiel, A. (2011b). Item selection and validation of a brief, 15-item version of the Need for Closure Scale. *Personality and Individual Differences, 50*(1), 90-94.