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## **PURDUE UNIVERSITY GRADUATE SCHOOL Thesis/Dissertation Acceptance**

This is to certify that the thesis/dissertation prepared

 $_{Bv}$  Mason Dyess Burns

#### Entitled

Prejudice Reduction Strategies and Their Effect on Interracial Interactions

For the degree of \_\_\_\_\_Master of Science

Is approved by the final examining committee:

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To the best of my knowledge and as understood by the student in the Research Integrity and Copyright Disclaimer (Graduate School Form 20), this thesis/dissertation adheres to the provisions of Purdue University's "Policy on Integrity in Research" and the use of copyrighted material.

Approved by Major Professor(s): Margo J. Monteith

Approved by:	Christopher R. Agnew	2/27/14		
	Head of the Graduate Program	Date		

Head of the Graduate Program

# PREJUDICE REDUCTION STRATEGIES AND THEIR EFFFECT ON

### INTERRACIAL INTERACTIONS

A Thesis

Submitted to the Faculty

of

Purdue University

by

Mason D. Burns

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Science

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## METHOD

LIST OF FIGURES		iv
ABSTRACT		v
INTRODUCTION		1
		2
Interracial Interactions	Interracial Interactions	7 9
METHOD		16
1		16
		16 17
Training Session		17
Interracial Interaction Session		19
RESULTS		26
5		26 26
		27
		29
		31
DISCUSSION		33
		39 40
		40
NOTES		42
LIST OF REFERENCES		43

Page

## APPENDICES

Appendix A.											54
Appendix B.											58
Appendix C.											
Appendix D.											
Appendix E.											
Appendix F.											
Appendix G											
Appendix H											

# Page

## LIST OF FIGURES

Appendix	Figure	Pa	ge
1.	Likelihood to self-disclose to Black interaction partner as a function of training condition and levels of IMS	5	4
2.	Proportion of total comments regarding affirmative action that voice concerns with affirmative action policies as a function of training condition and levels of IMS	5	5
3.	Promotion orientation as a function of training condition and levels of IMS	5	6
4.	Social distance as a function of training condition and levels of IMS.	5	7

#### ABSTRACT

Burns, Mason D. M.S., Purdue University, May 2014. Prejudice Reduction Strategies and Their Effect on Interracial Interaction. Major Professor: Margo Monteith.

With increased awareness of implicit bias in both research and media, understanding ways to reduce the negative effects of such bias has become of practical importance. The present research examined how implicit bias reduction strategies affect the experience of an implied interracial interaction. Results indicated that self-regulation learning (SRL) and counterstereotyping (CS) differentially impact how individuals experience an interracial interaction depending on their internal motivation to respond without prejudice (IMS). Specifically, results showed that individuals low in IMS self-disclosed more, were more promotion focused, and less physically avoidant following CS training relative to SRL training. At high levels of IMS, however, individuals self-disclosed more, were more promotion focused, and less physically avoidant following SRL training relative to CS. This evidence suggests that the specific processes involved in training strategies interact with IMS to differentially impact interacial interactions. Implications for future research and prejudice interventions are discussed.

#### INTRODUCTION

Social psychological research during the past couple of decades has revealed the prevalence of implicit intergroup bias and concomitant discriminatory outcomes (e.g., see Monteith, Woodcock, & Gulker, in press). These problematic biases are unsettling in many ways, including to people who discover that they hold such biases (Monteith, Voils, & Ashburn-Nardo, 2001; Vorauer, 2012). With the popularity of the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) in both the psychological literature (Greenwald, Poehlman, Uhlmann, & Banaji, 2009; Hofmann, Gawronski, Gschwender, Le, & Schmitt, 2005) and the news media (e.g., Banaji & Greenwald, 2000), implicit bias education has become more accessible. However, once people become aware of their implicit biases, how can they minimize their impact on their responses and hopefully change the implicit biases themselves?

Our lab has investigated two types of strategies that individuals can be taught that can help them to alter their implicit biases and associated discriminatory outcomes. The goal of the present research is to understand how these strategies and the motivation to respond without prejudice interact to influence the course and quality of interracial interactions.

#### **Implicit Bias Reduction Strategies**

Implicit intergroup bias differs from explicit bias in that implicit bias largely operates outside of conscious awareness. Despite potentially holding overtly or explicitly positive intergroup attitudes, implicit bias activation can lead individuals to have biased thoughts and reactions toward outgroup members. These automatic reactions are often the product of unintentional activation of negative associations following the presence of some environmental cue (e.g., Devine, 1989; Shiffrin, Dumais, & Schneider, 1981). In the case of racial bias, the presence of an outgroup member may automatically activate stereotypic traits that may then influence an individual's behavior (Devine, 1989; McConnell & Leibold, 2001; Payne & Gawronski, 2010). Implicit bias can result in various outcomes including less friendly interactions and increasing of social distance (Chen & Bargh, 1997; Dovidio, Kawakami, & Gaertner, 2002; McConnell & Leibold, 2001).

Numerous researchers have explored ways to shift automatic bias, at least temporarily (Blair, 2002). Two promising procedures for longer term implicit bias reduction are the Self-Regulation of Prejudice model (SRP; Monteith, 1993) and counterstereotyping (Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000).

The SRP model outlines a sequence of processes for learning to regulate and inhibit prejudiced responses (Monteith, 1993). When a stereotype becomes activated following some environmental cue and a biased response occurs (e.g., crossing the street to avoid walking close to an African American), such a response may be discrepant from how a person believes they should respond if they believe they should be behave as such. If this person becomes consciously aware of this discrepant response, he/she may then go through a series of responses with implications for selfregulation. First, arousal should be increased and be accompanied by behavioral inhibition, or an interruption in ongoing responding. Next, individuals will experience negative self-directed affect in the form of disappointment in self or guilt (e.g., Amodio, Devine, & Harmon-Jones, 2007). Then individuals may experience retrospective reflection. Retrospective reflection involves directing attentional resources toward environmental cues associated with the discrepant response. This process will lead to the development of associations between the consequences of the discrepancy (i.e., disappointment or guilt) and the related environmental context cues. Thus, the discrepant response results in the establishment of *cues for control*. These cues for control will serve as indicators in future situations where a discrepant response may occur. With the presence of such environmental cues for control, an individual may momentarily inhibit responding and gather regulatory resources in order to prevent a discrepant response from occurring in the future (Monteith, 1993; Monteith, Mark, & Ashburn-Nardo, 2010). Rather than responding in prejudiced ways, people may replace a biased response with an egalitarian response (e.g., not crossing the street to avoid an African American), gather additional information such as individuating rather than relying on category-based information, or correct for or suppress a biased response (see Devine & Monteith, 1999).

Laboratory research supports the SRP by demonstrating that individuals who are low in prejudice go through these steps when they become aware of their discrepant or biased responses (e.g., Monteith, Ashburn-Nardo, Voils, & Czopp, 2002). Additionally, research has demonstrated that individuals engage in the steps of the SRP in real world contexts on their own (Monteith et al., 2010).

Theoretically, the SRP model posits a central role for motivation and learning as individuals work on regulating their prejudiced responses. The model draws on Gray's conception of the behavioral inhibition system (BIS; Gray, 1976). According to Gray, BIS activity involves the "inhibiting of ongoing behavior, the increase in vigilance, and the increase in arousal which can be produced by stimuli associated with pain, punishment, failure, loss of reward, novelty, or uncertainty" (Gray & McNaughton, 2003, p. 4). In the context of the SRP, a discrepant response functions like a failure (i.e., a failure to meet one's standards for avoiding prejudiced responses). The SRP model also relates to social neuroscientific conceptualizations of how one monitors and detects the need for control and regulation (Botvinick, Braver, Barch, Carter, & Cohen, 2001).

Recently, our lab has adapted the SRP into an engaged training procedure referred to as Self-Regulation Learning (SRL). White participants first learn about the nature of implicit biases and the general tendency for many Whites to treat African Americans in biased ways. Then participants learn about the steps involved in the selfregulation of prejudice model. Participants are also given instructions on how they can identify discrepant responses in everyday life and how using the SRP can potentially inhibit such responding. The purpose of this training procedure is to have participants become more sensitive to the potential presence of discrepant responses, and to develop more cues for control across various situations. In doing so, individuals will be able to inhibit future prejudiced behaviors and responses that otherwise would go unchecked.

Since many people hold egalitarian self-concepts that emphasize tolerance toward other groups and the rejection of prejudice (Allport, 1954; Devine, Monteith, Zuwerink, & Elliot, 1991), being informed they are not living up to these standards may be troubling. SRP training is, in part, designed to achieve just this type of increased awareness. Such reminders will likely arouse feelings of dissonance within the participants, and a subsequent desire to reduce this inconsistency (Festinger & Carlsmith, 1959). Much research has been dedicated to examining how individuals grapple with and resolve such inconsistencies. Research has demonstrated that a common way to regain cognitive consistency involves altering or modifying one's behaviors to align them with their attitudes and personal standards (e.g., Dickerson, Thibodeau, Aronson, & Miller 1992; Martinie, Milland, & Olive, 2013; Stone & Fernandez, 2008; 2011; Stone, Wiegand, Cooper, & Aronson, 1997). Such behavioral change following dissonance is particularly likely to emerge to the extent individuals hold the specific standards to be important to their self-concept and are motivated to maintain this self-concept (Aronson, 1980; Dickerson et al., 1992; Thibodeau & Aronson, 1992). Additionally, individuals are likely to engage in behavioral modification following dissonance to the extent they feel personal responsibility for the negative consequences associated with their behaviors (Cooper & Fazio, 1984) – such as offending an outgroup member.

In the case of prejudice, when an individual is made aware they have behaved in a prejudice manner inconsistent with their (and society's) values upholding egalitarianism, they may experience dissonance. In the face of this dissonance, individuals will likely attempt to modify their future behaviors (rather than alter an important self-concept) to bring their thoughts and behaviors into alignment. SRP training provides individuals a tactic and strategy to achieve this goal. As such, to the extent one perceives the goal of egalitarianism as important; the more likely they will be to seek to change their behaviors following reminders of their dissonance.

Another promising strategy to combat the effects of implicit bias is *counterstereotyping*. Unlike the SRP model, counterstereotyping does not necessarily involve monitoring and inhibiting prejudiced responding. Rather, with counterstereotyping, people approach an egalitarian mindset by activating constructs that run contrary to stereotypes. Originally designed as a computer training procedure (Kawakami et al., 2000), counterstereotyping involves creating new associations between African Americans and constructs opposite to societal stereotypes for Blacks. Specifically, participants completing the computer training are presented with an image of a White or a Black man's face and two words. One word is stereotype consistent (e.g., lazy) and the other stereotype inconsistent (e.g., intelligent) for African Americans. As quickly as possible, and across hundreds of trials, participants trained in counterstereotyping practice selecting the counterstereotypic word in order to create new associations. As such, counterstereotyping emphasizes shifting category associations from negative to positive. After such training, participants show decreased evidence of automatic stereotype activation (Kawakami et al., 2000).

Counterstereotyping is a sensible strategy for changing implicit associations. CS training involves repeatedly activating alternatives to stereotypic associations based on group membership, so that these associations can potentially become automatically activated (Bargh, 1996; 1997) rather than the negative stereotypic associations. The focus remains on categorical thinking, however, rather than individuating outgroup members based on their unique traits.

Although this strategy was originally studied with laboratory computer training where participants applied counterstereotypes across hundreds of trials, recent work in our lab has adapted the procedure into an engaged training procedure for teaching people to use counterstereotyping in their everyday lives. As with SRL training, participants first learn about implicit bias and how it affects many Whites' responses toward Blacks. Participants are then educated on the theory and process of counterstereotyping. Additionally, participants receive computerized training, and are encouraged to use counterstereotypes in their everyday life when they encounter members of stereotyped groups. For example, a White individual may be walking toward a Black person on the street, and rather than thinking "aggressive" or "violent," may think "friendly" or "kind." Research in our lab has found evidence of reduced stereotypic and evaluative implicit bias over time with counterstereotyping practice.

#### **Interracial Interactions**

How dominant/majority group members feel and behave in interracial interactions is something that researchers have been interested in for some time (for a meta-analysis, Toosi, Babbitt, Ambady, & Sommers, 2011). Interracial interactions often provide a difficult and ambiguous situation where the opportunity to evaluate and be evaluated are both present. Among interaction partners of unequal social status, the experience of an interactial interaction can have implications for future interaction outcomes.

One consideration for majority group members in interracial interactions is the activation of metastereotypes, or stereotypes an individual believes another person has toward them (e.g., Finchilescu, 2010). For Whites, a commonly reported metastereotype is that of being prejudiced themselves. That is, Whites are concerned with being perceived as racist or biased toward their minority group interaction partner (Devine, Evett, & Vasquez-Suson, 1996; Finchulescu, 2010; Plant, 2004). Such concerns result in anxiety during interracial interactions. Additionally, these concerns can cause more negative experiences, and facilitate a desire to avoid future interactions (Ickes, 1984; Doerr, Plant, Kunstman, & Buck, 2011; Stephan & Stephan, 1985). To compensate for the expectation of appearing biased, White interactions partners may adopt any number of compensatory responses, which often have ironic negative consequences. For instance, research shows that White interaction partners, in fear of appearing biased, will avoid topics of race altogether (Apfelbaum, Sommers, & Norton, 2008). These individuals report less favorable interactions following such attempts to avoid the subject.

Additionally, without any specific type of training or strategy to employ in order to improve intergroup contact, individuals often demonstrate a prevention regulatory focus (Shah, Brazy, & Higgins, 2004; Trawalter & Richeson, 2006). In a prevention regulatory focus, individuals are concerned with avoiding negative outcomes rather than pursuing positive outcomes (i.e., promotion focus; Higgins, 1997). Adopting a prevention focus in interracial interactions depletes individuals' cognitive resources and can lead to an increased desire to avoid future interactions (Shah et al., 2004). This depletion may also result in individuals being more avoidant during interactions and having more difficulty suppressing stereotypical thinking (Macrae, Bodenhausen, Milne, & Jetten, 1994).

Another consideration in interracial interactions is the ambiguity these situations often present. Research indicates that majority group members typically view intergroup interactions as situations where they might be evaluated by their outgroup interaction partners (Vorauer, Hunter, Main, & Roy, 2000). This threat of social evaluation can then lead to social distancing and other avoidance tendencies (Goff, Steele, & Davies, 2008). This evaluation concern similarly appears to be a significant predictor of intergroup anxiety within the interaction (Finchilescu, 2010).

In sum, research consistently shows us that majority group members may suffer from anxiety or unease, the desire to avoid interracial interactions, and concerns with appearing prejudiced to their minority group interaction partners. The question of interest in the present research is how learning either the SRL or CS strategy will affect people's experiences with interracial interactions.

#### **Implicit Bias Reduction Training and Interracial Interactions**

Although both SRL and CS were designed to help individuals control or manage their implicit biases, they do so through different processes. Because of this, these training procedures may differentially impact people depending on their level of internal motivation to respond without prejudice (IMS; Plant & Devine, 2003). IMS refers to a desire to not express prejudice due to one's personal, egalitarian standards. IMS is of particular interest to the current study as IMS levels are negatively related to traditional prejudice measures (Devine, Plant, Amodio, Harmon-Jones, & Vance, 2002; Plant & Devine, 1998; Plant & Devine, 2003), greater willingness and ability to selfregulate prejudiced thoughts (Devine et al., 2002), and has also been linked to more positive expectancies for interracial interaction (Plant, 2004). As such, IMS is likely very important in predicting how these training strategies are employed and reacted to by individuals.

We would expect SRL training to generally be more effective than CS training for individuals who are higher in IMS. SRL involves detecting and feeling negatively about discrepant responses and being motivated to control potential biased responses in future situations. Such processes are more likely to occur in individuals who are highly internally motivated to respond without prejudice (Monteith et al., 2010). CS training, however, emphasizes categorical thinking and processing of outgroup members, albeit positive category associations. Previous research indicates that individuals lower in prejudice are generally motivated to engage in individuation rather than categorical thinking when processing information related to outgroup members (Sherman, Stroessner, Conrey, & Azam, 2005). Thus, given that high IMS individuals score lower on prejudice measures (e.g., Plant & Devine, 1998), the CS training strategy may not come naturally to individuals high in IMS as these individuals likely would be better suited with a strategy like SRL.

In contrast, the CS strategy may come more naturally to individuals low in IMS as compared to the SRL training strategy. Given that individuals low IMS tend to score higher on prejudice measures, and people with higher prejudice may be better suited for a category-based processing of outgroup members to individuation (Sherman et al., 2005), people low in IMS may find that the CS strategy comes more naturally to them. In contrast, the SRL strategy involves being motivated to carefully monitor one's responses for possible biases and is fueled by a desire to avoid biases that will cause one to feel guilty (e.g., Monteith, 1993). People who are relatively unmotivated to respond without prejudice based on their personal standards are less likely to adopt this strategy for controlling bias relative to people higher in IMS (Monteith et al., 2010). Additionally, individuals lower in IMS are less likely to go through the processes associated with SRL training (Monteith et al., 2010). Thus, the SRL strategy is less fitting for people who are lower in IMS.

How should the SRL and CS conditions compare to a control condition, in which participants receive no self-insight into their subtle racial biases or training? As reviewed above, past research indicates that interracial interactions have the potential to prompt a prevention focus along with anxiety and concerns about appearing prejudice. The extent to which our experimental situation would prompt these reactions is ambiguous (i.e., we used a structured and computer-mediated interaction, whereas other studies did not), and so we did not have clear predictions about precisely where the control condition participants would fall relative to the training conditions. That said, we did not expect SRL training among high IMS participants to result in more negative consequences compared to the control condition. In addition, we did not expect CS training among low IMS participants to result in more negative consequences compared to the control condition. On the other hand, strategies that were anticipated to provide a poor fit for participants at different levels of IMS (i.e., CS for high IMS participants and SRL for low IMS participants) may well result in more negative consequences compared to the control condition.

In the present research, two thirds of the participants were recruited for a training portion where they were either trained in SRL or CS. At the conclusion of the training, participants in the SRL and CS conditions were recruited for a seemingly separate study to occur a few days following the completion of their training. Control participants, however, were simply recruited for this second interaction portion without any prior experimental session. Later, participants came into the lab and engaged in an interaction (via instant messaging) with a partner they were led to believe was African American. Specifically, during this interaction, participants interacted with their partner in an open discussion, a question and answer period, and a discussion portion with provided topics. Following this interaction, participants completed measures assessing prevention and promotion regulatory orientations to assess how the training strategy impacted their desires to maximize the rewards (promotion) of the interaction or minimize the negatives (prevention) of the interaction. Finally, participants were told they would be able to interact with their partner face-to-face and selected a seat in relation to their interaction partner's seat as part of a social distance measure.

Within the initial open discussion portion, participants were prompted with a race-related comment and allowed to respond as they saw fit. The confederate always mentioned coming from a mostly African American town and that they are getting used to life here. Participants' willingness to self-disclose personal information to their interaction partner was conceptualized as a positive interaction behavior.

12

Self-disclosure represents an intimacy-building behavior that is an important marker of positive intergroup contact (Vorauer & Turpie, 2004).

For individuals low in IMS, we would expect CS training to result in a greater likelihood to self-disclose compared to the SRL condition, and CS training would not result in less likelihood disclosure than in the control condition. For individuals higher in IMS, we would expect the opposite pattern to emerge. Specifically, individuals high in IMS were expected to be more likely to self-disclose with SRL training relative to the CS condition, and SRL training was not expected to result in less likelihood to disclose than in the control condition.

During the topic discussion portion, participants briefly discussed affirmative action among other race-neutral topics. Participants' willingness to critically discuss a race-related issue rather than avoid racially sensitive issues was conceptualized as a positive interaction behavior. At high levels of IMS, individuals trained in SRL were expected to engage in more critical discussions of affirmative action than participants in the CS condition, and SLR should not result in fewer cons statements than in the control condition. We expected that at low levels of IMS, CS training would result in a greater proportion of concern statements regarding affirmative action relative to the SRL condition, and CS should not result in fewer concern statements than in the control condition.

Following the interaction, participants completed measures of their promotion and prevention orientations during the course of the experiment. Promotion focus emphasizes maximizing goals and attempting to facilitate positive outcomes. As such, promotion orientation for this interaction represents a positive focus when engaging an outgroup member. For individuals higher in IMS, the SRL strategy may initially facilitate a *prevention* focused mindset and a decrease in approach behaviors in individuals immediately following the training as a function of feelings of guilt (Amodio et al., 2007; Higgins, 1997; Richeson & Shelton, 2007). However, when presented with an opportunity to approach non-biased responding in an interracial interaction, SRL is likely to shift toward approach-related behaviors and produce a *promotion* regulatory focus (Amodio et al., 2007). Specifically, individuals who are high in IMS should approach the interracial interaction with the goal of avoiding biases (Monteith et al., 2001; Monteith et al., 2010). They should be focused on responding in egalitarian ways, and more so than in the CS condition. Conversely, individuals low in IMS are likely to better suited for CS training relative to SRL training and be more promotion oriented. CS training is likely to promote an egalitarian mindset and allow individuals low in IMS to avoid biased responses.

Participants also responded to a series of items assessing how much they enjoyed the interaction, felt anxious during the interaction, were annoyed by the interaction, and sought to avoid the interaction. We did not expect these measures of interaction quality to have significant differences across conditions as they are likely to arouse socially desirable responses. Since individuals are careful to report positive attitudes and reactions that maintain a nonprejudiced self-image as well as to maintain a positive image to others (e.g., Crosby, Bromley, & Saxe, 1980; Dovidio & Gaertner, 1986; Roese & Jamieson, 1993), we would not expect differences in these measures across training conditions and levels of IMS. Finally, following the computer mediated interaction; participants were given a chance to meet their interaction partner face to face. Participants selected a seat in relation to where they believed their partner had decided to sit. A greater distance between the confederate's seat and the participant's chosen seat reflects a desire to avoid their partner and socially distance themselves from their Black partner. As such, individuals who chose to sit closer to their partner were conceptualized as engaging in more positive interaction behaviors. At low levels of IMS, individuals trained in CS were expected to sit closer to their partner than the SRL trained participants, and CS participants were not expected to sit further away than control participants. Conversely, at high levels of IMS, individuals trained in SRL were expected to sit closer than individuals trained in CS, and participants in the SRL condition should not sit further away than control participants.

In sum, we expected that individuals trained in SRL will engage in more positive interaction behaviors if they are higher in IMS as compared to CS trained participants. The control condition was included to ensure that learning about subtle biases and the SRL training did not lead to more negative consequences than in the control condition. At low levels of IMS, however, we expected individuals trained in CS to engage in more positive interaction behaviors as compared to SRL trained participants. Here, comparisons with the control condition were important to establish that learning about subtle biases and the CS training did not lead to more negative consequences than in a control condition.

#### METHOD

#### **Participants**

One hundred and ten White participants (60 female and 50 male) participated in both sessions of the study. These participants were recruited on the basis of race as we were solely interested in the reactions of White individuals. In addition, the prescreen allowed us to recruit participants who had been in the United States for at least 5 years to ensure a familiarity with American societal stereotypes.

#### Design

A 3 (training condition: SR, CS, or control) X continuous (IMS) betweenparticipants design was used. The IMS assesses the degree to which individuals are personally motivated to not act in prejudiced ways across five items (e.g., "Being nonprejudiced toward Black people is important to my self-concept") (Plant & Devine, 1998). IMS was collected within the initial training session for individuals trained in SRL or CS, but was collected during a prescreen session for all control participants. Within this prescreen data collection session, IMS was measured on a 1-7 scale while in the training sessions it was measured 1-9. As such, IMS scores were standardized within each distribution to form our IMS index ( $\alpha = .87$ ).

#### Procedure

#### **Training Session**

All training took place on a Monday so as to allow for the interaction to take place later in the week. Prior to arrival in the lab, participants signed up for this study via SONA. Upon arrival at the participant waiting room, participants were greeted by a White experimenter and taken into a lab room in small groups ranging from 1 to 5. Before beginning the experiment, participants were asked to read and sign an informed consent form for the first session. They were then provided with a cover story describing the experiment as investigating whether associations between mental concepts can be changed. All participants were randomly assigned to one of the two training conditions based on experimental session.

After participants in the two training conditions completed a brief race-related IAT for illustrative purposes, the experimenter began a discussion about automatic associations people may hold toward African Americans in our society. Specifically, participants and the experimenter discussed how the media portrays African Americans in stereotypical ways (e.g., criminals, unintelligent) and that these frequent associations provide the basis of stereotypes. Participants were instructed that they may not actively endorse these stereotypes, but that these frequent pairings create associations between African Americans and related negative concepts in our minds and the associations can have negative consequences. Examples of these associations were given along with explanations of how they can often influence people's responses toward Blacks in stereotypic or biased ways. For instance, participants were provided with examples of how associations between African Americans and criminality might result in

individuals avoiding contact with African Americans on the street, checking the location of their purse or wallet, or locking their car door in in the presence of an African American. Experimenters solicited anecdotes and examples that the participants were willing to share illustrating automatic associations and the negative consequences they have experienced in their everyday lives.

In the SRL training condition, participants were provided with a handout illustrating the model (Appendix B). Experimenters described the various components and steps involved in the SRP model. Examples were given at each step and participants were told how each step may manifest itself in the real world. Examples were provided of discrepant responses and how processing them can establish specific cues for control. Participants were encouraged to share their own examples of discrepant responses that personalized the material as well as illustrated how this process works in their lives.

Participants in the CS training condition were provided with a handout illustrating the theory (Appendix C). The experimenter led participants in a discussion detailing counterstereotyping and provided examples to illustrate the theory. An handout illustrating counterstereotyping was provided that outlined how the concept of African Americans is often linked with negative stereotype concepts due to repeated exposure in the media. To contrast this model of negative associations, a counterstereotypic model was similarly depicted. This model allowed participants to see how more positive associations can be created and activated. Examples were also solicited from participants to personalize the information. Following this discussion, participants in the CS condition completed a computerized practice session to facilitate an understanding of CS. For each trial, an image of a Black or White face along with two words appeared. One word was a stereotype consistent trait term while the other was a stereotype inconsistent trait. Participants were tasked with selecting the trait that represented the opposite of the societal stereotype of the race pictured as quickly as possible across 75 trials. For instance, if the image was of an African American face and the two traits were "ambitious" and "lazy," participants were to select "ambitious" as quickly as possible. The experimenter emphasized that this procedure can be used in everyday situations by thinking of nonstereotypic traits in relation to Blacks.

After the training and discussion, participants completed a filler dependent variable measure to ostensibly conclude the experiment. Before participants left this session, they were asked by the experimenter to sign up for what was advertised as an unrelated study that would be conducted later in the week for payment of \$15. Because training always was conducted on a Monday, participants were able to sign up for this separate study any other weekday. The training and interaction parts of the study were presented as separate studies so that the focus on race in Session 2 would not be obvious. In addition, the time delay allowed participants to have the opportunity to practice the strategies outside the lab if they were so motivated.

#### **Interracial Interaction Session**

After the delay (ranging from one to four days), trained participants were brought to a different lab room by a different White experimenter than the one who trained them (in the case of SRL and CS trained participants). Untrained control participants were recruited to complete just this second interaction portion. All participants were informed that they would be engaging in a one-on-one interaction with another participant via an online instant messaging program. Similar procedures have been used in previous research (e.g., Czopp, Monteith, & Mark, 2006; Finchilescu, 2010).

Participants were taken to a lab room with a computer and told that another participant was in another adjacent lab room. In truth, the other participant was always a confederate who was blind to the participants' condition. Participants were provided with basic demographic information about the other participant along with a photograph ostensibly taken in the lab room that identified the interaction partner as African American. In addition, this demographic information and photograph were used to convey the gender of the interaction partner, which was always matched to that of the participants'. The African American who participants believed they were interacting with was a college aged individual with a neutral expression. Photographs had a neutral background similar to the walls lining the experimental rooms to lead participants to think the photographs were taken immediately prior to the experiment (Appendix D). To make the procedure believable, participants were asked to provide their demographic information as well as a photograph of themselves to give to their interaction partner. The photograph of the interaction partner was uploaded onto the computer screen alongside the instant messaging program to increase the saliency of race throughout the conversation.

Participants were then informed that the study was concerned with the processes involved in individuals getting to know one another through online

interactions. Participants were told that following the instant messaging portion of the experiment they would have an opportunity to meet their interaction partner in person. Participants were told that they would be allowed to freely discuss whatever topics they saw fit for the first five minutes of the procedure. Embedded in the conversation was a critical question. Specifically, the confederate always asked the participant, "How do you like Purdue so far?" Participants were then be given an opportunity to respond freely. Whether the participant asked the same or similar question back to the confederate, the confederate always responded by saying that they came from a predominately African American high school and that they were adjusting to the demographics of Purdue's campus. Specifically, the confederate asked the participant how they like Purdue so far. Whether the participant reciprocated the question, the confederate would write, "It's pretty cool here. I came from a mostly black town so it's been weird getting used to."

This scripted response served two purposes. First, it increased the saliency of race beyond the photograph by introducing a race-related topic. Second, the confederate self-disclosed, and we could examine whether the participant self-disclosed in return.<sup>1</sup>

Following this initial interaction, participants engaged in a task adapted from Aron et al. (Aron, Melinat, Aron, Vallone, & Bator, 1997) examining interpersonal closeness. In this procedure, participants were told that in order to get to know the interaction partner better, they would be going back and forth answering a series of questions. In Aron and colleagues original study, participants responded to certain items designed to establish closeness between interaction partners, or other items designed to establish an acquaintance relation. We used a subset and mixture of the items (Appendix E). Participants were instructed to ask the first question from the list of items. Confederates then provided a scripted response. Afterward, the participant would provide their answer to the same question before moving on. Following this exchange, the confederate asked the next question on the list of items, and waited for the participant's response before providing their own scripted response. Participants and confederates continued to ask and answer questions until the list of questions was exhausted. This procedure has been used previously in similar interaction research to establish a common level of closeness in interaction procedures and to provide a task for interacting (Mann & Kawakami, 2012; Vorauer & Sasaki, 2011; Vorauer, Gagnon, & Sasaki, 2009).

Next participants moved on to a different type of discussion. Participants were told that this discussion concerned topics of some controversy in which two people could have opposing opinions. Embedded in a list of eight topics was one critical racerelated topic of affirmative action (Appendix F). The participant was told that their interaction partner (the confederate) was going to pick the first topic of discussion. The confederate always picked affirmative action and provided a scripted response on the subject, writing that they understand that the issue is really complex, but overall they are for programs designed to level the playing ground for underrepresented and underprivileged members of society. Specifically, confederate said, "I don't know, it's complicated and sometimes isn't done in a fair way but I guess I'm in favor of programs that help get minorities jobs who might not otherwise because of racism." This statement was designed to be ambivalent and to provide the opportunity to discuss both benefits and concerns of affirmative action if participants so chose. Responses were coded later (details provided in Results section). Three more discussion topics were discussed in a similar manner to maintain the cover story. Prior research has also used discussions of race-related topics to explore reactions in interracial interaction settings (e.g., Gailliot, Baumeister, DeWall, Maner, Plant, Tice, Brewer, Schmedichel, 2007; Richeson & Trawalter, 2008; Trawalter & Richeson, 2008).

Next participants completed a 26-item questionnaire assessing their reactions to the interaction, and a factor analysis performed later revealed 4 distinct factors, Enjoyable assessed how much individuals enjoyed the interaction (M = 5.57, SD = .76,  $\alpha = .85$ ). Anxiety assessed the degree to which individuals reported feeling uncomfortable or at ease during the interaction (M = 2.71, SD = 1.13,  $\alpha = .83$ ). The factor Annoying refers to the degree to which individuals were annoyed by the interaction and their interaction partner (M = 2.07, SD = .80,  $\alpha = .74$ ). Avoidance assessed the degree to which individuals sought to avoid their interaction partner during the conversation (M = 1.77, SD = .88,  $\alpha = .78$ ).

Participants also completed prevention/promotion orientation scales (Cunningham, Raye, & Johnson, 2005; Lockwood, Jordan, & Kunda, 2002). These scales were adapted to reflect the nature of the interaction as a means of assessing how much the participant tried to enhance or maximize the interaction (promotion focus) versus tried to prevent errors or mistakes from occurring throughout the interaction (prevention focus; see Appendix G). Cunningham and colleagues (Cunningham et al., 2005) developed a 2-item measure of promotion orientation. (e.g., I focused on opportunities that would enhance the interaction). Similarly, Lockwood and colleagues (Lockwood et al., 2002) developed a 4-item measure of promotion orientation (e.g., I typically focused on the success I hoped to achieve in the interaction). All items were combined to form an index of promotion (M = 4.7, SD = .81,  $\alpha = .68$ ). Additionally, Cunningham and colleagues developed a 2-item measure of prevention orientation (e.g., I focused on ensuring that I would avoid potential mishaps or negative events during this interaction). Lockwood and colleagues also developed a 6-item measure of prevention focus (e.g., I frequently thought about how I could prevent failures in the interaction). All items were combined to form an index of prevention orientation (M = 4.44, SD = .65,  $\alpha = .77$ ).

Finally, participants were told that were going to meet their interaction partner in person. Participants were escorted from their laboratory room to waiting room set up. The participant was led to believe that his/her interaction partner was escorted to this room just prior and had left their belongings on a chair. This waiting room had several chairs with a backpack placed upon one (room layout; Appendix H). The experimenter indicated that the other participant was in the restroom and would be back shortly and that they should have a seat wherever they like.

The distance between where the participant chose to sit in relation to the backpack served as a measurement of physical avoidance behaviors. Having participants select a seat in relation to where they thought an outgroup member is has been used as a measure of social distancing in similar interaction research (e.g., Goff et al., 2008). After the participant made their seat selection, the experimenter revealed the true nature of this experiment and thoroughly debriefed the participant while assessing any possible suspicion. No participants indicated suspicion that training session and interaction were actually one study. Participants were then asked to sign Permission to Use Data Form for payment, thanked, and allowed to leave.

#### RESULTS

#### **Plan of Analysis**

All dependent measures were analyzed using a hierarchical linear regression approach. Specifically, dummy codes were created to represent training conditions (SRL: 1, 0; CS: 0, 1; control: 0, 0), creating two variables carrying the comparison between SRL and the control (DC1) and the CS-control comparison (DC2). Interaction terms between each of these codes and IMS were computed (i.e., DC1xIMS and DC2xIMS). Hierarchical regression was performed for each dependent variable entering in gender, IMS, and the delay between the Monday training and the interaction (to control for the effects of delay). In Step 2, DC1 and DC2 were entered as a set, and in Step 3 the interaction terms were entered. Terms involving the dummy codes were assessed as a set by looking at the change in  $\mathbb{R}^2$  associated with the set. If the change in  $\mathbb{R}^2$  was significant, follow-up comparisons were performed (altering the dummy coding where necessary to make test comparisons of interest). Interactions were probed using MODPROBE (Hayes & Matthes, 2009).

#### **Self-Disclosure**

Whether participants self-disclosed (= 1) or not (= 0) when the Black confederate indicated his/her problems with adjusting to Purdue was coded by two individuals who were blind to experimental condition (% agreement = 97.3%). (This

variable was initially coded continuously with a count of the number of self-disclosures but was later computed as a dichotomous variable because of its bimodal distribution.) A binary logistic regression was conducted to see how the dummy codes and IMS predicted likelihood to self-disclose. The logistic regression analysis indicated a marginally significant change in  $R^2$  at Step 3,  $\Delta \chi^2$  (2, N = 110) = 5.73, p = .06. The interaction was plotted and probed for significance (Figure 1). At low levels of IMS, none of the conditions significantly differed from one another, although CS trained participants ( $\hat{Y} = .88$ ) were marginally more likely to self-disclose than SRL participants ( $\hat{Y} = .54$ ), Z = 1.88, SE = .97, p = .06. At high levels of IMS, the CS condition ( $\hat{Y} = .50$ ) resulted in marginally less likelihood to self-disclose than the control condition ( $\hat{Y} = .79$ ), Z = -1.77, SE = .78, p = .08. Additionally, although nonsignificant, at high levels of IMS, SRL ( $\hat{Y} = 1.79$ ) training resulted in a trend toward more self-disclosures, Z = -1.67, SE = .82, p = .10, relative to CS trained participants ( $\hat{Y} = .50$ ). The pattern of results is somewhat consistent with the expectation that among participants low in IMS, CS training was more likely to prompt intimacy-building behaviors in the form of self-disclosure as compared to SRL training while being no less likely to self-disclose as compared to control participants. At high levels of IMS, however, SRL training resulted in a marginally greater likelihood to selfdisclose as compared to the CS condition while being no different from control participants.

#### **Comments About Affirmative Action**

Two raters coded the responses to the confederate's affirmative action opinion. Specifically, raters coded the number of comments voicing concerns with affirmative action relative to the total comments made in this section (r = .92). A willingness to critically discuss a racially sensitive topic like affirmative action is being taken to reflect ease and comfort in interacting with an African American, and less concern/anxiety with appearing prejudiced. Since concerns with appearing prejudice are often linked with negative interracial interactions (e.g., Vorauer & Kumhyr,, 2001; Vorauer, Main, & O'Connor, 1998), a willingness to critically discuss concerns about affirmative action suggests a decrease in prejudiced appearance concerns and more positive interaction behaviors. To control for individual differences in total responses provided, the number of anti-affirmative action comments were divided by the total number of comments regarding affirmative action to create an index of proportion of affirmative action comments that are critical to such policies.

The hierarchical linear regression analysis for proportion of affirmative action concerns yielded a significant increment in R<sup>2</sup> associated with the interaction between strategy condition and IMS,  $\Delta R^2 = .12$ ,  $\Delta F(2, 91) = 3.56$ , p = .03. At low levels of IMS, individuals trained in SRL were no different than individuals trained in CS. Additionally, individuals low in IMS and trained in CS were no more likely to selfdisclose than individuals in the control condition. However, individuals trained in SRL ( $\hat{Y} = .22$ ) were somewhat less likely to bring up concerns about affirmative action policies relative to control participants ( $\hat{Y} = .32$ ), although this effect was not significant, t(91) = -1.68,  $\beta = -.14$ , p = .10. At high levels of IMS, individuals trained in SRL ( $\hat{Y} = .32$ ) voiced more concerns than control participants ( $\hat{Y} = .16$ ), with the effect being marginally significant, t(91) = -1.68,  $\beta = .16$ , p = .06. Similarly, at high levels of IMS, individuals trained in CS ( $\hat{Y} = .39$ ) were significantly more critical of affirmative action than individuals in the control condition, t(91) = 2.37,  $\beta = .23$ , p = .02. No differences were found when comparing SRL and CS trained participants at high IMS. In sum, the results indicated that both CS and SRL training strategies resulted in more willingness to critically discuss a controversial topic such as affirmative action for individuals high in IMS.

The results for the affirmative action partially supported our expectations. Specifically, at low levels of IMS, individuals trained in CS were somewhat more willing to voice concerns with affirmative action relative to SRL trained participants, but this effect did not reach significance. Additionally, CS trained participants were no less willing to voice concerns relative to a control. However, results for individuals high in IMS are not consistent with our expectations. That is, we would expect that individuals high in IMS and trained in CS would be *less* willing to voice concerns relative to the SRL condition. However, high IMS participants in the CS condition were actually more willing to voice concerns than high IMS participants in the control condition. The finding that participants high in IMS and in the SRL condition voiced marginally more concerns than their counterparts in the control condition points to an apparently positive effect of using this strategy.

#### **Promotion/Prevention Orientation**

The regression for the Overall Promotion orientation yielded a significant increment in R<sup>2</sup> at Step 3,  $\Delta R^2 = .07$ ,  $\Delta F(2, 95) = 3.97$ , p = .02. At low levels of IMS, SRL ( $\hat{Y} = 4.46$ ) and CS ( $\hat{Y} = 5.45$ ) conditions differed significantly such that CS trained participants were more promotion oriented than SRL trained participants, t(95)= 2.1,  $\beta = .69$ , p = .04. At low levels of IMS, CS trained participants ( $\hat{Y} = 5.15$ ) marginally differed from the control ( $\hat{Y} = 4.56$ ), t(95) = 1.76,  $\beta = .59$ , p = .08. Thus, at low levels we see that CS training results in a tendency toward greater promotion orientation than both SRL and control participants. The opposite pattern was obtained at high levels of IMS. At high levels of IMS, SRL ( $\hat{Y} = 5.00$ ) and CS ( $\hat{Y} = 4.37$ ) trained participants differed significantly such that individuals trained in SRL were significantly more promotion oriented than CS participants, t(95) = -2.2,  $\beta = -.63$ , p =.03. At high level of IMS, neither SRL nor the CS condition differed from the control condition.

Another way to understand this interaction is in terms of specific experimental conditions. Individuals trained in SRL differ significantly on promotion orientation between low and high levels of IMS, t(95) = 2.39,  $\beta = .27$ , p = .02. Additionally, individuals trained in CS marginally differed between low and high levels of IMS in promotion orientation, t(95) = -1.88,  $\beta = -.39$ , p = .06.

These results are consistent with our expectation that positive effects of the strategies on promotion would depend on levels of IMS. Specifically, at low levels of IMS, individuals trained in CS were more promotion oriented than individuals trained in SRL. Further, at low levels of IMS, individuals trained in CS were no less promotion oriented than individuals in the no training control. Consistent with our expectations, individuals high in IMS and trained in SRL were more promotion oriented than individuals trained in CS. Additionally, SRL trained participants high in IMS were no less promotion oriented than control participants. No significant results were obtained for the prevention focus items. As such, we can conclude that training does not alter prevention focus in individuals relative to no training.

#### **Social Distance**

Chair distance was measured in inches such that greater numbers reflect greater distance placed between the participant and the confederate. Measuring from the center of each chair, the distance between the confederate's chair and the closest available seat was 36 inches The second closest available seat was 67 inches away, third available seat was 79 inches away, the fourth chair was 105 inches away, and the furthest chair was 122 inches away. The number of inches placed between the participant and their interaction partner served as the social distance dependent variable. The regression analysis yielded significant increment in R<sup>2</sup> for Step 3,  $\Delta R^2 = .12$ ,  $\Delta F(2, 84) = 5.78$ , p < .01 (Figure 4). At low levels of IMS, individuals trained in SRL sat significantly further away ( $\hat{Y} = 86.37$ ) than CS trained participants ( $\hat{Y} = 67.59$ ), t(84) = -2.40,  $\beta = -18.78$ , p = .02. Additionally, at low levels of IMS, SRL trained participants sat significantly further away from the confederate than control participants ( $\hat{Y} = 73.74$ ), t(84) = 2.18,  $\beta = 12.63$ , p = .03.

At high levels of IMS, individuals trained in CS sat significantly farther away  $(\hat{Y} = 89.09)$  than individuals trained in SRL  $(\hat{Y} = 70.59)$ , t(84) = 2.63,  $\beta = 18.50$ , p = .01. Additionally, at high levels of IMS, CS trained participants sat further away than control participants  $(\hat{Y} = 73.43)$ , t(84) = 2.35,  $\beta = 15.66$ , p = .02.

Another way to conceptualize these data is in terms of differences across IMS for specific conditions. For individuals trained in CS, the effect of IMS was significant, t(84) = 2.16,  $\beta = 10.58$ , p = .03. Additionally, for individuals trained in SRL, the effect of IMS was also significant and in the opposite direction IMS, t(84) = -2.89,  $\beta = -7.76$ , p < .01.

This pattern of responding is consistent with our expectation for low IMS individuals. That is, individuals lower in IMS engaged in more positive interaction behaviors following CS training relative to SRL training, and were no different than control participants. This pattern of results is also consistent with our expectation that individuals higher in IMS would engage in more positive interaction behaviors following SRL training as compared to CS training. At high levels of IMS, additionally, individuals trained in SRL were no different than the control.

#### DISCUSSION

This study was interested in how CS and SRL training might affect the course of an interracial interaction. Specifically, we were interested in seeing how such training may improve or disrupt such interactions. A great deal of research indicates that gaining awareness of one's own implicit bias is a necessary first step in being able to combat the effects of implicit biases (Devine, 1989; Devine & Monteith, 1993), and both SRL and CS training necessarily involve telling individuals of their biases and the negative intergroup consequences these biases can cause. Because such awareness can disrupt positive interracial interactions (e.g., Vorauer, 2012), understanding the effects of implicit bias reduction strategies that increase awareness (such as SRL and CS) on intergroup contact is important.

SRL training deals with increasing individuals' awareness of their biases while also informing them that they may be able to control these biases through careful monitoring of potential biased reactions they may make across different situations (Monteith, 1993; Monteith, Lybarger, & Woodcock, 2009). CS training, on the other hand, emphasizes bias reduction by shifting negative category-based stereotypic associations to more positive associations. CS has been developed from a laboratory training procedure (Kawakami et al., 2000) to an applied strategy by having participants use implementation intentions (Gollwitzer, 1999) to activate positive associations with Blacks.

These strategies differ in the specific processes and mechanisms by which they accomplish implicit bias reduction. With this in mind, we expected the efficacy of the training strategies for improving interracial interactions to be moderated by IMS. Previous research indicates that individuals higher in IMS are more likely to use SRL even without training in their everyday lives relative to individuals lower in IMS (Monteith et al., 2010). Additionally, individuals high IMS are more likely to engage in self-regulatory processes posited by the SRP model (e.g., negative self-directed affect; Devine, et al., 1991; Monteith, 1993; Monteith et al., 2002). Further, individuals higher in IMS are more likely to individuate others relative to categorical-based thinking about outgroups (Sherman et al., 2005). As such, we would not expect CS training to be employed as readily or as easily as SRL training for individuals higher in IMS.

We would expect a different pattern at low levels of IMS. For these individuals, a category-based training procedure is likely better suited for them as it is in keeping with their preexisting tendencies toward categorical thinking about outgroups (Sherman et al., 2005). Additionally, individuals low in IMS are less likely to engage in the various regulatory processes outlined by the SRP model (e.g., negative self-directed affect). As such, CS training is likely more effective at improving intergroup contact behaviors relative to SRL training at low levels of IMS.

Across four dependent variables, results generally supported these predictions. Self-disclosures in intergroup contact represent a very easy and effective intimacybuilding behavior for individuals to use to help engage in positive interracial interactions (Vorauer & Turpie, 2004). Our results demonstrated the necessity to consider the joint effects of specific training strategy and IMS to understand how bias reduction training affects interracial interactions. Specifically, our results showed that individuals were marginally more likely to self-disclose following SRL training as compared to the CS condition at high levels of IMS (p = .08). Importantly, individuals high in IMS and trained in SRL were no less likely to self-disclose as compared to the untrained participants. Similarly, individuals self-disclosed marginally more following CS training as compared to SRL training at low levels of IMS (p = .06). Additionally, individuals low in IMS and trained in CS were no less likely to self-disclose than untrained control participants. From this we can conclude that at high levels of IMS, interracial interactions are not disrupted by SRL and at low levels of IMS CS training does not disrupt the likelihood to self-disclose relative to untrained participants. The finding that SRL does not disrupt self-disclosing at high levels of IMS and that CS does not disrupt self-disclosures at low levels at IMS is encouraging. That is, individuals who learn about the presence of their bias, but are given a strategy compatible with their level of IMS; do not avoid self-disclosures more than individuals unaware of their implicit bias.

A willingness to discuss racially sensitive topics in intergroup contact is important for the facilitation of positive interactions (Apfelbaum et al., 2008; Norton, Sommers, Apfelbaum, Pura, & Ariely, 2006). As such, we were particularly interested in investigating how learning about implicit bias and strategies for controlling this bias would affect individuals' willingness to discuss racially sensitive topics such as affirmative action. Our results only partially supported our expectations. Given our interpretation of this measure as a subtle indicator of participants' comfort in the interracial interaction, certain patterns were consistent with expectations while others were not. Although not reaching significance, participants low in IMS had a greater proportion of concern statements regarding affirmative action in the CS condition than in the SRL condition (p = .17). Furthermore, participants high in IMS had a marginally greater proportion of negative comments regarding affirmative action in the SRL than in the control condition (p = .06). The odd aspect of the results was that high IMS participants in the CS condition also expressed a greater proportion of concerns regarding affirmative action than their counterparts in the control condition (p = .02). We do not have a strong explanation for why this was the case and think that replication would be in order before trying to interpret the odd pattern. That is, when individuals choose to not voice concerns about affirmative action, we are unable to determine whether this behavior reflects an avoidance of race topics in the fear of appearing prejudiced (e.g., Apfelbaum et al., 2008), or simply reflects the participant holding generally positive attitudes toward affirmative action policies. Future research is required to better explain the patterns of responding following CS and SRL training.

Consistent with our expectations, individuals low in IMS and trained in CS were more promotion oriented as compared to the control condition, although only marginally so (p = .08), and significantly more promotion oriented as compared to the SRL condition. At high levels of IMS, individuals trained as SRL were significantly more promotion oriented as compared to the CS condition and no different from the control condition. With previous research implicating greater promotion orientation in the improvement of intergroup contact (Trawalter & Richeson, 2006), the results

demonstrating that these training strategies either increase promotion orientation or, at the very least do not reduce (relative to the control) is encouraging.

Further still, our finding that these training procedures do not increase prevention orientation in interracial interactions is also encouraging. Prevention focus is often described as the default mindset for individuals engaging in interracial interactions (Richeson & Shelton, 2007; Trawalter & Richeson, 2006; Vorauer & Kumhyr, 2001) and can result in people not making the most of intergroup contact. Since our results do not demonstrate an increase in prevention, and in some cases demonstrate an increase in promotion orientation, we can conclude that CS training benefits individuals low in IMS and SRL training benefits individuals high in IMS in the way these individuals approach potentially uncomfortable interracial contact.

Finally, and consistent with our expectations, our results demonstrate that individuals low in IMS preferred more distance from their interaction partner following SRL training relative to CS and control participants. At high levels of IMS, CS training resulted in increased distance between the participant and their interaction partner relative to both the SRL and control participants. These findings add to our understanding of antecedents of social distancing. Previous research has demonstrated how perceived norms (Sechrist & Stangor, 2001) and levels of implicit and explicit bias (McConnell & Leibold, 2001) can impact the preferred distances Whites place between themselves and Blacks. Our research, however, demonstrates that in addition to these antecedents, SRL and CS training can interact with IMS to predict physical avoidance of Blacks. More generally, the results again point to the negative consequences of CS training relative to SRL training among individuals low IMS, and the negative consequences of SRL relative to CS training among individuals high IMS.

A great deal of work has examined how the experience of interracial interactions may be difficult for individuals, especially when they attempt to respond without bias (e.g., Norton et al., 2006; Shelton, Richeson, Salvatore, & Trawalter, 2005). However, individuals experience this difficulty differently depending on their levels of bias (Wittenbrink, Judd, & Park, 1997). The current work contributes to our understanding of this difficulty by establishing IMS as a meaningful moderator in understanding the effects of different self-regulatory training strategies in an interaction context. Our results are consistent with our expectation that depending on individuals' level of IMS; they may find a category-based bias reduction strategy (CS) more palatable for them versus a more individuated approach (SRL).

In addition to the aforementioned findings, results from this study did not demonstrate that training had any impact on explicit measures of interaction quality or enjoyment. This is not particularly surprising. Participants possessed conscious control over their explicit ratings of the interaction's quality and their experience within the interaction and were likely motivated to present themselves in a positive manner (Crosby et al., 1980; Dovidio & Gaertner, 1986; Roese & Jamieson, 1993). However, their desire to self-disclose, their likelihood to discuss racially sensitive topics, , and tendency to physical avoid Blacks are less likely to be under less conscious control as they represent subtle or indirect indicators of interaction quality. Additionally, the cover story for this study emphasized that this study was interested in how individuals get to know one another through computer-mediated communication. As such, participants likely believed that the research would assess enjoyment, anxiety, appearance concerns, etc. regarding the interaction. As such, the participants generally behaved in a positive manner and indicated they enjoyed the interaction and liked their partner.

#### **Future Research**

The interaction used for this study was heavily scripted. Rather than just let two people communicate freely for some time, we had participants discuss specific topics so that we could maintain control of scripted responses and keep things consistent across participants and conditions. Additionally, this interaction was not face-to-face, but rather, computer-mediated. As such, we were unable to measure nonverbal behaviors that are associated with anxiety in interracial interactions (e.g., body posture, eye contact, eye blinking; Dovidio et al., 2002). In future research, a less regimented and/or face-to-face interaction could be conducted in order to more fully understand how these training procedures affect interracial interactions. Although a different procedure may be preferable for future iterations of this study, it is hard to see how results would be different. In fact, we can reasonably suspect that the structured nature of this procedure resulted in underestimated effects that would only become stronger within a more naturalistic interaction.

We have suggested that some of the differences observed between individuals high and low in IMS involve the tendencies for individuals high in IMS to individuate outgroup members. However, the degree to which individuals attempted to view their interaction partner as an individual or relied on category labels was not measured in the current study. Future research is needed to support this interpretation. By assessing the degree to which individuals attempted to individuate their interaction partner following SRL or CS training we will get better picture of the processes by which training strategies and IMS interact to predict different outcomes.

Additionally, the current study only used an implied Black interaction partner without a White interaction partner comparison group. As such, we cannot conclude that training strategies improved interactions with outgroup members relative to ingroup members. Future research could include such a comparison condition. Nevertheless, our results still demonstrate the utility in training strategies to not just improve certain interactial interaction behaviors relative to other training procedures, but by not disrupting interaction behaviors with Black partners relative to untrained participants.

#### **Concluding Remarks**

In sum, results from this study underscore the importance of IMS and implicit bias reduction strategies in understanding the difficulties Whites experience in interracial interactions. Our results demonstrate that two training strategies and IMS interact to predict the likelihood for individuals to engage in positive interaction behaviors such as self-disclosures, discussion of racially sensitive topics, promotion orientation, and physical avoidance. A category-based strategy (CS) was better suited for individuals lower in IMS while a strategy emphasizing careful monitoring of one's behaviors in specific situations (SRL) was better suited for individuals higher in IMS.

We know that interactial interactions are often stressful. Furthermore, we know that when individuals become aware of the presence of their own implicit bias these interactions can become even more difficult (Vorauer, 2012). However, informing people of their bias while simultaneously providing a means to manage or control their bias can attenuate or even improve some interaction outcomes - so long as the processes emphasized by the specific management technique are compatible with individuals' internal motivation to respond without prejudice.

#### NOTES

<sup>1</sup>Although the confederate's comment was meant to convey to participants that Purdue has fewer Black students than the confederate was used to, many students did not take the statement in this way. Of the 110 participants, 30 (27.3%) responded by stating that they agreed that Purdue was very diverse (e.g., "Yeah for once I feel like I'm not in the majority it's really different," and "It is definitely a diverse campus, that's for sure!"). Only 8 participants clearly interpreted the comment in the desire way with remaining participants being unclear. In other words, these participants totally misinterpreted the Black student's comment. Although we had planned to analyze aspects of this dialogue beyond self-disclosure (e.g., whether participants expressed empathy to the confederate), the fact that participants interpreted the confederate's statement in unintended ways precluded us from doing so. LIST OF REFERENCES

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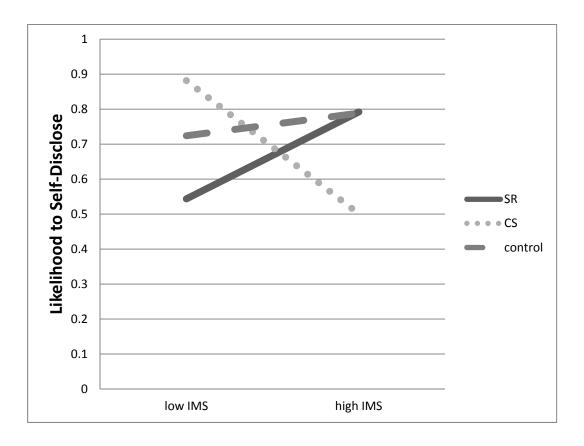
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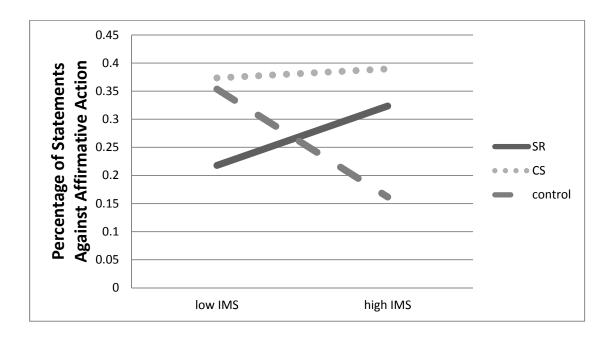
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APPENDICES

# Appendix A



*Figure 1*. Likelihood to self-disclose to Black interaction partner as a function of training condition and levels of IMS.



*Figure 2*. Proportion of total comments regarding affirmative action that voice concerns with affirmative action policies as a function of training condition and levels of IMS.

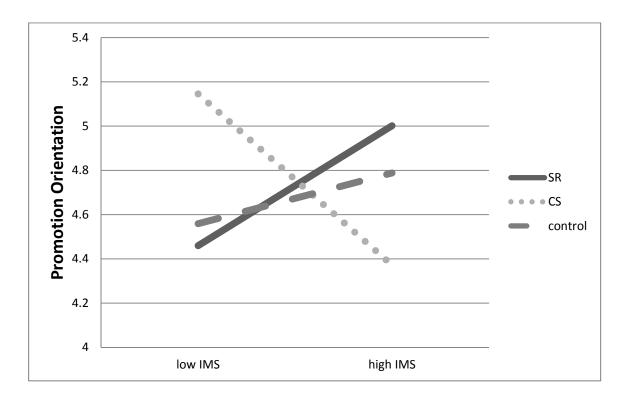


Figure 3. Promotion orientation as a function of training condition and levels of IMS.

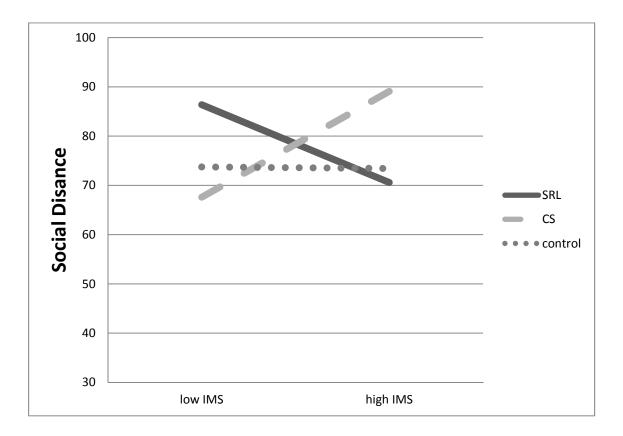
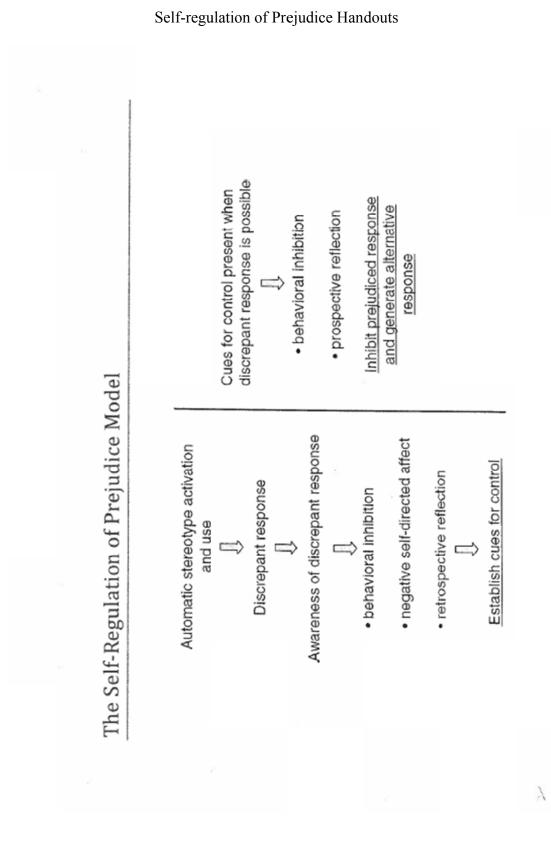


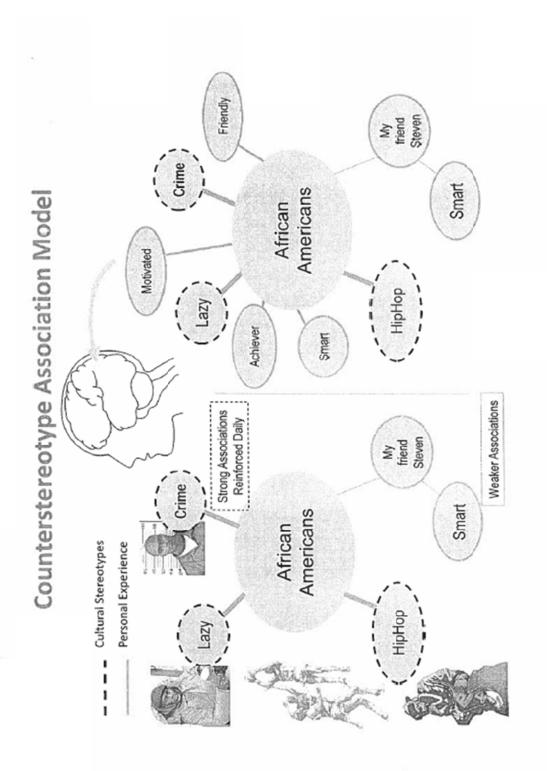
Figure 4. Social distance as a function of training condition and levels of IMS.



Appendix B

# Appendix C

### Counterstereotyping Model Handout



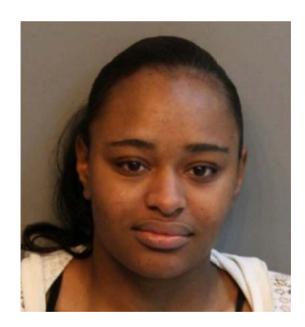
# Appendix D

# Photos Presented of Black Interaction Partners

Male:



Female:



### Appendix E

### Closeness-generating/Small-talk Items

- 1. Given the choice of anyone in the world, whom would you want as a dinner guest?
- 2. What was the best gift you ever received and why?
- 3. What would constitute a "perfect" day for you?
- 4. If you had to move from Indiana where would you go, and what would you miss most about Indiana?
- 5. If you could change anything about the way you were raised, what would it be?
- 6. What is your favorite holiday? Why?
- 7. What do you value most in friendship?
- 8. What was your first impression of Purdue the first time you ever came here?
- 9. Your house, containing everything you own, catches fire. After saving your loved ones and pets, you have time to safely make a final dash and save any one item. What would it be? Why?
- 10. What foreign country would you most like to visit? What attracts you to this place?
- 11. If you could wake up tomorrow having gained any one quality or ability, what would it be?
- 12. What is the last concert you saw? How many of the band's albums do you own? Had you seen them before? Where?
- 13. Is there something that you've dreamed of doing for a long time? Why haven't you done it?
- 14. How did you celebrate last Halloween?
- 15. What, if anything, is too serious to be joked about?
- 16. Describe the last pet you owned.

### Appendix F

### **Discussion Topics**

Please pick from one of the workplace topic below to discuss. After informing your partner of what topic you have chosen, please indicate your general opinion on the topic. Following this, your interview partner will do the same. Then they will pick a topic and give their opinion, at which time you will be asked to provide your opinion on the topic.

- Affirmative action policies policies that promote the hiring of underrepresented individuals (members of different racial groups, women, differentially abled).
  - Should organizations be required or encouraged to hire minority group members in order to counter the underrepresentation of minority members and create a more diverse workplace?
- Business provided benefits
  - Should businesses be required to offer health insurance for employees, or should employees be required to seek out insurance on their own?
- Drug testing
  - Should businesses be allowed to administer drug tests to employees even if drug use is not directly related to job performance, or is this an invasion of employee privacy?
- Computer/Internet monitoring
  - Should businesses be allowed to continue to monitor what their employees do on their computers in order to maximize efficiency, or is this an invasion of employee privacy?
- Retirement age
  - Should businesses be allowed to impose general retirement ages or should they be forced to consider every individual employees performance?
- Daycare
  - Should companies be required to provide daycare for working fathers/mother whom they employ, or should parents be required to find daycare options elsewhere?
- Social media
  - Should businesses be allowed to make hiring/firing decisions using information collected from employee's social media profiles (i.e., Facebook, MySpace, etc.), or is this information not relevant in such decisions?
- Environmental protection
  - Should businesses be permitted to require employees to be more environmentally friendly, or should companies not be allowed to require their employees to do anything unrelated to work performance?

### Appendix G

Adapted Prevention/Promotion Self-report measures

Lockwood, Jordan, & Kunda, 2002 (items 1-14)

Cunningham, Raye, & Johnson, 2005 (items 15-18)

1	2	3	4	5	6	7	8	9	
Strongly								Strongly	
Disagree								Agree	
1.	In general, I was focused on preventing negative events in this interaction.								
2.	I was anxious that I would fall short of my responsibilities and obligations during this								

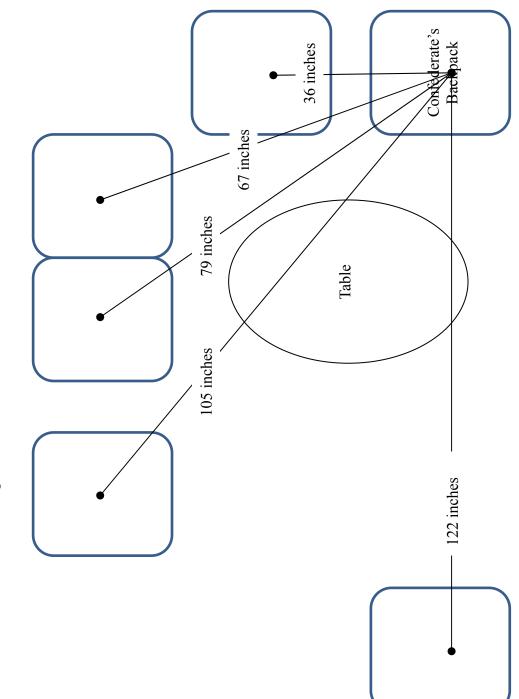
interaction.3. I frequently imagined how I would achieve my hopes and achieve my goals in this

- \_\_\_\_\_ 5. I frequently imagined now I would achieve my nopes and achieve my goals in this interaction.
- 4. I typically focused on the success I hoped to achieve in the interaction.
- 5. I often worried that I would fair to accomplish my goals in the interaction.
- 6. I often thought about how I would achieve success in this interaction.
- 7. I often imagined myself experiencing bad things that I fear would happen to me during the interaction.
- 8. I frequently thought about how I could prevent failures in the interaction.
- 9. I was more oriented toward preventing losses than I was toward achieving gains during this interaction.
  - 10. I see myself as someone who is primarily striving to reach my "ideal self" to fulfill my hopes, wishes, and aspirations.
  - 11. I see myself as someone who primarily striving to become the self I "ought" to be to fulfill my duties, responsibilities, and obligations.
    - 12. In general, I was focused on achieving positive outcomes in the interaction.

1		2	3	4	5	6	7	8	9
Stron	gly								Strongly
Disag	gree								Agree
13. I often imagined myself experiencing good things that I hope would happen during the									
	inte	raction.							
14. Overall, I was more oriented toward achieving success than preventing failure in the									
		interaction.							
	15. I fo	cused on opp	ortunities that	at would enh	ance the inter	raction.			
	16 I fo	rused on ensi	uring that I w	yould avoid r	otential mish	ans or negat	tive events d	uring this	

64

- 16. I focused on ensuring that I would avoid potential mishaps or negative events during this interaction.
- \_\_\_\_\_ 17. I was primarily motivated by seeking potential successes during the interaction.
- 18. I was primarily motivated by avoiding failures during this interaction.



Appendix H

Waiting Room Chair Orientation