RACIAL EXEMPLARS AND THEIR EFFECTS ON THE RACE-IMPLICIT

ASSOCIATION TEST

By

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Research on prejudice has long been skewed by participants' ability to monitor their reactions on overt measures of such attitudes. Accordingly, researchers created an implicit measure to study prejudice (Greenwald & Banaji, 1995). The Implicit Association Test (IAT) was thus developed. Though the IAT has long been purported as the only 'true' measure of participants' feelings and cognitions, recent research has suggested the measure is not as infallible as once purported (e.g., Smith & Zarate, 1990). The purpose of this study was to integrate existing research on exemplars and how they affect scores on the IAT. Results showed that priming participants with racial exemplars that vary in terms of stereotypicality and valence had little effect on Race-IAT scores. Further, contrary to previous research, significant differences between African American and European American participants on the Race-IAT did emerge.

DEDICATION

I would like to dedicate this study to my mother for her unwavering support and
confidence in my ability, my sister for keeping me humble, and my father for telling me
that, 'It's okay to be a radical, just make sure you know what you're talking about.'

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

Implicit cognition was defined by Greenwald and Banaji (1995) as the

unconscious ability of past experiences to influence thoughts or feelings about some

situation or object. Due to the unconscious nature of these cognitions, it was reasoned

that an implicit measure -- a measure that would gauge a participant's feelings about an

object or situation without his or her knowledge -- would be needed to study them

(Greenwald & Banaji, 1995). The Implicit Association Test (IAT) was thus developed.

The purpose of the present study was to integrate existing research on exemplars to

examine how they affect scores on the IAT. Although previous studies (i.e., Smith &

Zarate, 1990; Blair, Ma, & Lenton, 2001) have shown that both the valence and the

stereotypicality of an exemplar can affect IAT scores, no previous study has

simultaneously compared these two types of exemplars or examined their combined

effects. The present study aimed to fill this gap.

Literature Review

An Overview of the Implicit Association Test (IAT)

In 1998, the Implicit Association Test (IAT) was developed by Greenwald, McGhee, and Schwartz to unobtrusively, or without an individual's knowledge, measure an individual's attitudes or beliefs. As a diagnostic tool, the IAT measures the amount of time it takes a participant to pair a word with a picture or symbol (i.e., latency period). For example, an individual may be asked to pair the word "good" with a European American face and the word "bad" with an African American face. Next, the object the word is paired with may be switched (e.g., good with Black and bad with White). It was presumed by the IAT's creators that taking longer to pair a word with one picture or symbol in comparison with another meant the participant preferred the picture or symbol that registered the shorter latency period.

Previous IAT studies have shown that when the IAT is used to measure prejudice, people responded more quickly if positive characteristics are paired with European American racial stimuli and negative characteristics are paired with African American racial stimuli (Dasgupta, Mcghee, Greenwald, & Banaji, 2000; Greenwald, McGee, & Schwartz, 1998; Ottaway, Hayden, & Oakes, 2001)[1]. Dubbed the 'IAT Effect' by some researchers, these results indicate that individuals, regardless of race, have a preference for European Americans (Dasgupta & Greenwald, 2001). It is thought that, because the IAT is posited to be the only 'true' and 'infallible' measure of biased attitudes, the slower reaction times that come when participants are asked to pair good words with African

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[1] See discussion for recent exception to these findings

Americans are due to internalization of automatic and unconscious cultural stereotypes. These stereotypes identify African Americans as 'bad' and European Americans as 'good.' Simply, IAT researchers purport that people seem to be more inclined to pair African Americans with 'bad' and, as such, they can do so faster than if they were asked to do the opposite.

Since the advent of the IAT, a plethora of research has been conducted expanding the application of the IAT and the understanding of the underlying processes affecting IAT responses. A portion of the existing research has examined the effect of the presentation of an exemplar -- a representative of a given group (e.g., racial group) -- on subsequent IAT scores. Building off this exemplar research, the general purpose of this project was to determine whether priming participants with positive and negative, stereotypic and counterstereotypic racial exemplars may influence the occurrence of the IAT Effect mentioned previously. Consistent with past research (Blair, Ma, & Lenton, 2001; Smith & Zarate, 1990), it is expected that both the valence and the stereotypicality of an exemplar prime will impact the IAT Effect. Unlike the previous research, however, the present research combines changes to the valence and stereotypicality of the exemplar prime to determine what effects these two variables have separately as well as together. As will be seen in the literature review that follows, there is reason to believe that implicit attitudes may be more malleable than previously conceived.

The Use of Exemplars and Their Effects on the IAT

Research on exemplar activation -- using an individual representative of a group to influence a participants thought or feelings about a group -- has indicated that it, like

stereotype activation, is automatic (Smith & Zarate, 1992). To put it more succinctly, just as a stereotype we may hold about a group is activated the moment we think of that group, if we are presented with an exemplar for that group, thoughts of that exemplar are activated in much the same way. As such, it seems that stereotype processing and exemplar-based processing occur at the same level and may be activated at the same time (Smith & Zarate, 1992).

In one example of the use of exemplars to influence stereotype formation, Smith and Zarate (1990) asked participants to form overall impression of a confederate. Participants were instructed to do so in order to be able to describe what the confederate was like, and to distinguish the group membership of the confederate. Smith and Zarate then divided participants into two groups. The first group of participants learned the 'prototype,' or the general attributes of the group with which they were presented. The second group of participants learned about the group they were presented with through the presentation of an exemplar (i.e., one individual from that group). Results indicated that learning the 'prototype' or stereotype for the group before evaluating individuals lead participants to rely much more on group stereotypes when describing the individual and classifying the individual into a group (Smith & Zarate, 1990). Individuals who learned through exemplars, however, categorized based on the similarity of the individual being evaluated to the exemplars with which they were presented, regardless of the exemplar's similarity to the group stereotype (Smith & Zarate, 1990). In other words, individuals who learned of group prototypes (stereotypes) before encountering group members

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seemed to be more likely to engage in prototype bias (stereotypic) processing, but this was not the case for those presented with an exemplar.

In another study on the use of exemplars to influence stereotypic responding, Coats and Smith (1999) exposed participants to gender exemplars (e.g., Playboy, promiscuous, homemaker, blue-collar). The researchers found that descriptions of women differed between the exemplar conditions. For example the 'promiscuous' woman exemplar was described as 'stupid' and 'dependent' by participants exposed to Kelley Bundy, a presumably stereotypic exemplar of a promiscuous woman. In contrast, participants exposed to the exemplar of Madonna, a presumably counter-stereotypic exemplar of a promiscuous woman, did not apply the same attributes (e.g., "stupid," "dependent"). In Coats and Smith's study, the stereotypicality of the exemplar seemed to influence the participant's attitudes about the exemplar in question. These results, then, indicated that stereotypicality of a prime can influence an individual's thoughts or feelings about a group.

In a similar study, Blair, Ma, and Lenton (2001) placed participants into conditions in which they were asked to think of exemplars. In one condition of this study, participants were asked to imagine counter-stereotypic examples of men and women. Participants were instructed to think about what the counter-stereotypic individual would be like and capable of doing (Blair, Ma, & Lenton, 2001). As a result of imagining counter-stereotypic exemplars of women, participants produced much weaker gender IAT scores (Blair, Ma, & Lenton, 2001).

Accordingly, it appears that priming participants with stereotypic or counter-stereotypic exemplars seems to have a significant effect on whether or not an individual uses stereotypes to classify individuals and/or groups. Presenting participants with exemplars that vary as to their stereotypicality, however, may not be the only way for exemplars to affect an individual's judgments. While the stereotypicality of an exemplar may influence a participant's thoughts or feelings about an individual or group, researchers have also determined that the perceived positivity or negativity of the exemplar (i.e., the valence of the exemplar) may have just as much influence. In a study similar to the one being proposed, Dasgupta and Greenwald (2001) showed participants pictures of admired African American individuals (e.g., Denzel Washington), disliked African Americans (e.g., Mike Tyson), disliked European American individuals (e.g., Jeffrey Dahmer), admired European Americans (e.g., Tom Hanks), or a nonracial exemplar (2001). The participant's task was to identify the person or object in the pictures. After the task was completed, participants took the IAT. Dasgupta and Greenwald found that when participants were shown a positive African American exemplar the 'IAT Effect' normally found was greatly diminished. The amount of time it took participants to pair African American faces with pleasant words was cut in more than half when compared to participants who were shown pro-European American pictures.

Study Rationale

As the previous research has indicated, priming participants with exemplars can lead to changes in the way participants think about groups and group members. Both the

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valence and the stereotypicality of an exemplar have been found to affect IAT scores. However, no previous study has compared these two types of exemplars or examined their combined effects. The present study aimed to fill this gap in the literature by using a 2 x 2 x 2 experimental design in which the valence (i.e., positive or negative), the stereotypicality (i.e., stereotypic or counter-stereotypic) as well as the race (i.e., European American or African American) of an exemplar prime is manipulated.

Consistent with past research, I expect effects of both valence and stereotypicality within the race of exemplar, such that if presented with either a more positive *or* counter-stereotypical African American exemplar, the IAT score elicited would be more pro-African American. Likewise, I expect that if participants are presented with a positive or counter-stereotypic[2] European American exemplar, the IAT score might be more pro-European American. I thus expect the greatest impact on IAT scores to be evident when valence and stereotypicality are combined, with the smallest IAT effect being evident for the positive, counter-stereotypic African American exemplar.

Also, the race of the participant might be an important factor to control for in this experiment. Although previous IAT studies have typically not shown a difference in scores between African American and European Americans (see Nosek, Smyth, Hansen et al., 2007 for a review), no study, to date, has examined how race of participant might play a role in exemplar priming effects research. As such, whether the race of the

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[2] Note, however, that it may be that the positive stereotypic European American exemplar yields a stronger IAT effect, as that is the "standard" exemplar assumed to be on the mind of individuals when completing the IAT. However, results of past studies manipulating stereotypicality of exemplar have not been clear re: the effects of this variable on perceptions of European Americans.

participant could significantly affect the results of the experiment in light of the exemplar prime remains to be seen. However, as at the time this research was initiated, no evidence pointed to race of participant being an important variable, the inclusion of participant race as an additional variable was largely exploratory.

I believe this study contributes to the literature not only on implicit associations but also on stereotyping and prejudice by shedding more light on the processes that may affect our implicit stereotypic responding. If results from this study revealed greater effects for the stereotypicality of an exemplar prime than for the valence, it would reaffirm the validity of the IAT as a measure of cognition as purported by the IAT's originators. However, if results indicate greater effects for the valence of an exemplar prime, it would speak to the IAT being more of a measure of affect, not of cognition.

CHAPTER II

METHOD[3]

Participants

Three hundred and thirteen undergraduate students were recruited from introductory psychology classes and received credit toward fulfillment of course requirements in exchange for their participation[4]. Of those participants, the mean age was 18.86 years ($SD = 1.32$) with 39.9% of participant being male and 60.1% being female. Seventy point three percent of the participants were European American, and 24% were African American. Of the remaining participants, 2.9% classified themselves as Asian or Asian American, 0.3% were Middle Eastern, 1.6% were Hispanic/Latino, and the remaining 1.0% classified themselves as Biracial. The individuals who did not label themselves as European American or African American were not used in our analysis as it was determined that the race of the participant was a factor that needed to be controlled. As such, 295 participants were included in the analysis. Of those 295 participants, the mean age was 18.83 years ($SD = ?$). Responses to racial and gender

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[3] Pilot testing methodologies, procedures and results can be found in Appendices C and D

[4] An initial pilot study was conducted unsuccessfully. The goal of this initial pilot was to find famous or well know African Americans and European Americans to be used as our exemplar primes. However, statistical analyses did not indicate clearly which famous European Americans and African Americans participants thought were positive/negative and stereotypic/counter-stereotypic. In particular, participants had difficulty classifying people in terms of stereotypicality.

identification questions revealed that 74.6% of participants classified themselves European American while 25.4% of participants classified themselves as African American; 39.7% classified themselves as male while 60.3% classified themselves as female.

Materials

Exemplar Profiles

The exemplar profiles were created using the attributes that were identified as the most clearly negative and most clearly positive in the initial pilot survey. For the methodology, procedure, and results of the initial pilot study see Appendix C. Because previous work by Devine (1989) had determined which attributes were judged to be stereotypic, our counter-stereotypic profiles were created using the opposite term. For example the negative stereotypic term for an African Americans was 'lazy.' As such, the counter-stereotypic exemplar used the term 'motivated.' The characteristics that were manipulated were: education, motivation, superiority, or being privileged. Being musically and athletically talented as well as criminality, laziness, and being poor were also manipulated. To ensure the profiles were rated as intended by our participants, a second pilot study was conducted. See Appendix D for methodology, procedure, and results. A grid of the adjectives used for each profile can be found in Appendix D as well. An example of one of our exemplar prime profiles is as follows:

African American, Negative, Stereotypic

> Brandon is a nineteen-year-old African American male who grew up in
> one of the rougher neighborhoods in inner-city Atlanta. One of his chief

interests is music. He spends much of his time listening to and producing rap and hip-hop music. As such, he is considering majors in music or business management/production. The university to which he was accepted offered him a highly competitive basketball scholarship, awarded only to those at the top of their game. He is currently enrolled at his university, though he has been put on academic probation both semesters. He is currently under investigation for cheating by buying exams and papers off of others.

In this case, the stereotypic aspects of this profile are the individual's upbringing in a bad neighborhood/his being poor, his interest in music, and his athleticism. The negative aspect is his cheating which can be construed as laziness. If this had been the positive exemplar of a Stereotypic African American, all aspects would have been the same, except that the individual would have been excelling in school. In the counter-stereotypic example, the African American exemplar was depicted as a student from a suburban neighborhood who was privileged and acted superior to those around him and, who was neither athletic nor musically inclined. See Appendix F for a complete list of the exemplar profiles.

During the experimental section of this project, profiles of the fictitious individuals were used as exemplar primes. These profiles, as noted in the appendices, were determined to be effectively viewed as positive/negative and stereotypic/counter-stereotypic. A control prime that described a Hawaiian vacation was also included. This control prime was modeled after a similar study which had also used exemplar priming in order to create changes in IAT scores (see Blair, Ma, & Lenton, 2001). Participants were asked to read through their assigned profiles for five minutes, then spend five minutes thinking about the person or place in the profile. They were instructed to think about what the person would be like and what they might do. In the case of the control prime,

participants were asked to think about what that place might be like and what they might do there. After the five minute reflection period, participants were asked to rewrite the profile they had been given as well as they could from memory. This recounting procedure was employed to ensure participants had actually studied the profiles as instructed. After being primed with one of the exemplars or the control, participants were asked to take the Race-IAT.

Dependent Variable: Race-Implicit Association Test (IAT)

A Race-IAT was created by the experimenter using a software package known as E-Prime. Stimulus materials were taken from the Project Implicit website (https://implicit.harvard.edu/implicit/). These materials included the stimulus pictures and words that were used in this section of the experiment. The Race-IAT employed in the present study was administered using the standard procedure used by IAT creators. When taking the Race-IAT, a participant is presented with words and/or images which appear in the center of the screen. Classification categories appear at the top left and right hand corners of the participants computer screen. In order to complete the Race-IAT, participants must place the words and/or pictures that appear in the middle of the screen into the correct categories. An example of what a Race-IAT screen can be seen in Figures 1-3 below.

In the Race IAT, there are seven 'trial blocks' with 20 or 40 'trials' in each block; one 'trial' is the presentation of one word or one picture. For a detailed description of the exact procedure of the Race-IAT, please refer to Nosek, Greenwald, and Banaji (2007) and see Table 1.

Table 1

Sequence of Blocks in an IAT Measuring Race Evaluations

Block	No. of trials	Items assigned to left-key response	Items assigned to right-key response
B1	20	Faces of African Americans (AA)	Faces of European Americans (EA)
B2	20	Pleasant words	Unpleasant words
B3	20	AA faces + Pleasant words	EA faces + Unpleasant words
B4	40	AA faces + Pleasant words	EA faces + Unpleasant words
B5	40	Faces of EA	Faces of AA
B6	20	EA faces + Pleasant words	AA faces + Unpleasant words
B7	40	EA faces + Pleasant words	AA faces + Unpleasant words

Note. A trial is defined as the time from the onset of a single stimulus to the correct categorization of that stimulus. Trials in which an error is made require the participant to correct the error before proceeding. Blocks B3, B4, B6, and B7 alternate trials presenting a pleasant or unpleasant word with trials presenting an African American or European American face. The sorting rules in blocks B1, B3, B4 are counterbalanced with B5, B6, B7 between subjects.

In the first trial block, participants sorted African American and European American faces into the appropriate categories for 20 trials. That is, participants matched pictures of African Americans and European Americans with the correct racial category that appeared at the top left and right of their screen. Participants would hit the 'E' key to indicate the picture belonged on the left or an 'I' key if the picture fit under the category on the right.

Figure 1. Trial block 1 or 5.
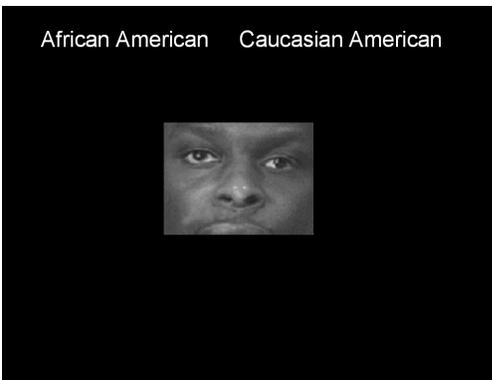
In the second trial block, again for 20 trials, participants are asked to sort positive and negative words into the appropriate categories.

Figure 2. Trial block 2.

In the third and fourth trial block, participants sorted both words and pictures combined into the appropriate categories with the third trial block containing 20 trials and the fourth trial block containing 40 trials.

Figure 3. Trial block 3 and 4 as well as 6 and 7.

After the third and fourth trial blocks, the race categories were switched to the opposite sides of the screen (i.e., if African American was first on the left it would now be on the right) and the fifth trial block begins. In this block participants are again asked to sort 40 trials of African American or European American faces into the appropriate categories. Lastly, in the sixth and seventh trial block, participants are asked to sort 20 and 40 trials, respectively, of both pictures and words into the appropriate categories. If a mistake was made by the participant (i.e., a picture or word was placed in the wrong category) a red 'X' would appear at the bottom of the computer screen and the participant would have to make the correct classification before they could move on. The number of incorrect classifications and the time it took for participants to make the correct sorting was recorded. Scores on the Race-IAT could range from -2 to +2.

Design

The experimental portion of this study employed a 2 x 2 x 2 factorial design in which the stereotypicality of the exemplar prime, the race of the exemplar prime, and the valence of the exemplar prime were manipulated. In this case, the valence of the prime,

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its stereotypicality, and the race of the prime were the independent variables. Each of the independent variables had two levels. The valence of the exemplar prime could be positive or negative, the prime could be either stereotypic or counterstereotypic and the race of the prime could be either African American or European American. A control prime was also employed as one of the independent variables. Participants were randomly assigned to one of the nine possible conditions using a nine-sided virtual die.

The dependent variable in this experiment was the participant's score on a Race-IAT that was constructed using E-Prime. Scores for the IAT were computed using the scoring algorithm suggested by Greenwald and colleagues (2003). This scoring algorithm allows for the computation of a latency score for each participant. This latency score indicates how long it took the participant to complete one IAT task in comparison to another (i.e., pairing European American faces with good words versus pairing African American faces with good words). In the case of this Race-IAT, a more negative score indicates a preference for European Americans.

Procedure

Participants signed up for a session via Sona-systems, and, in advance of their arrival in the lab, were randomly assigned to one of nine conditions by a 9-sided virtual die. The condition the participant was assigned to determine which of the eight exemplar profiles the participant received. Assignment to our control condition meant participants would not be exposed to an exemplar prime, but would instead be asked to read a neutral stimulus paragraph (e.g., the Hawaiian vacation story).

Upon entering the lab, participants were given a consent form that described the cover story for the project. The cover story was that the purpose of the study they were about to participate in was to determine if there was any difference between how people learned via a computer and how people learned via a textbook. In order to compare the two mediums, participants were told, they would perform a pencil and paper memory task and then a computer-based matching task. The 'memory task' was actually the exemplar priming task while the 'matching task' was actually the Race-IAT. Once consent was obtained, participants were given the paragraph profile of the racial exemplar or neutral stimulus paragraph they had been assigned to under the guise that it was a memory task. Participants were given five minutes to read through their paragraph. Similarly to the priming method used in previous studies (see Blair, Ma, & Lenton, 2001) participants were instructed to take five minutes to think about what they had read as well as what they believed the person in the profile would be like and what kind of things they might do. In the case of our control paragraph, which was a description of a Hawaiian vacation, participants were told to think about what it would have been like to be on that vacation and what kind of things they would have done. After they had done that, the participants were given five minutes to write down as much of the paragraph as they could remember. Once the five minutes were up, all materials were taken away from the participant.

Next participants were instructed as to the procedure of the 'matching task,' actually the Race-IAT. As described above, the Race-IAT is a reaction time task in which participants are asked to sort words and/or pictures into categories. Participants

were told that, in the computer matching task, they were going to be asked to sort both words and images into different categories. Participants were also told that the categories would appear at the top left and right of their computer screen while the specific word or picture would appear in the middle of the screen.

In order to disguise the true nature of the study, participants were told they would be randomly assigned to sort pictures of good or bad words, fruits or vegetables, men or women, or African Americans or European Americans into the appropriate categories. The experimenter then reiterated that the categories would appear at the top left and right of the computer screen while the images and/or words would appear in the middle of the screen. Further, the experimenter explained that the words and/or images that were presented on the participant's computer screens were to be place into their appropriate categories by using the 'E' or 'I' keys on their keyboard. In order to classify an image or word into a category on the left, the participant was told to hit the 'E' key. To classify images or words into the category on the right, the participant was told to hit the 'I' key. Participants were informed that they would then perform the tasks multiple times, but that the categories may appear on different sides of the computer screen and that some tasks may be longer than before. Lastly, the participants were told to make sure they completed the matching tasks as quickly and as accurately as they possibly could, as the tasks were timed and going too slow or making too many mistakes could result in un-usable data. As soon as the experimenter had typed in the participant's ID number, the participant was able to begin by pressing the spacebar when prompted by the computer. For the full sequence of trial blocks of the IAT administered, see Table 1.

Upon completion of the IAT, participants were probed for suspicions of the true

nature of the study and debriefed. No participants had become suspicious as to the true

nature of the study. Participants were then given the opportunity to erase their recorded if

they chose. Lastly, they were thanked for their participation and awarded points for

participation

Analysis of IAT Results

The following algorithm was recommended by Greenwald and colleagues (2003)

for IATs in which participants must correct errant responses before continuing. This

algorithm allows for the computation of response latencies which tell us how long it took

participants to place the different stimulus materials in the appropriate categories. In the

case of this Race-IAT a more negative response latency indicated it took participants less

time to place pictures of European Americans with good words than it did for them to

place pictures of African Americans with good words. Thus, participants with a more

negative score show a 'preference' for European Americans. As mentioned previously,

scores on the Race-IAT can range from -2 to 2. A simple explanation of this algorithm

was given by Nosek and colleagues (2007):

> (1)   use data from Blocks 3, 4, 6, and 7 (see Table 1); (2) eliminate trials with latencies >
>
>   10,000 ms; (3) eliminate subjects for whom more than 10% of trials have latencies
>
>   <300 ms; (4) compute one standard deviation for all trials in Blocks 3 and 6, and
>
>   another standard deviation for all trials in Blocks 4 and 7; (5) compute means for
>
>   trials in each of the four blocks (3, 4, 6, 7); (6) compute two difference scores (one
>
>   between 3 and 6 and the other between 4 and 7) subtracting what is intended to
>
>   represent the high (positive) end of the measure from the block containing

associations representing the low end; (7) divide each difference score by its

associated standard deviation from Step 4; and (8) average the two quotients from

Step 7. (p. 268).

CHAPTER III

RESULTS

Consistent with past research, I expected effects of both valence and stereotypicality within the race of the exemplar, such that if presented with either a positive or counter-stereotypical African American exemplar, the IAT score elicited would be more pro-African American than if presented with a negative or stereotypic African American. Thus, I expected significant two-way interactions of valence x exemplar race and stereotypicality x exemplar race. Further, I expected the greatest impact on IAT scores to be evident when valence and stereotypicality are combined, with the smallest IAT effect being elicited for the positive, counter-stereotypic African American exemplar (i.e., a three-way interaction of stereotypicality, valence, and exemplar race). It was also hypothesized that the race of the participant might be an important factor to control for in this experiment. Although previous IAT studies have typically not shown a difference in scores between African American and European Americans (see Nosek, et al., 2007 for a review), no study, to date, had examined how race of participant might play a role in exemplar priming effects research. As such, whether the race of the participant could significantly affect the results of the experiment in light of the exemplar prime remained to be seen. I will first present the descriptive

statistics of the Race-IAT. Next, I will go over findings as they relate to the hypotheses, first describing the main effects found and then any interactions.

Experiment: Descriptive Statistics

As stated earlier, Race-IAT scores can range from -2 to +2, and, in this study, a more negative IAT score indicates more of a preference for European Americans (e.g., the IAT Effect). An analysis of our control condition alone revealed that the expected IAT Effect was found, $M = -0.23$ ($SD = 0.39$), indicating a preference for European Americans. As such, it appears that our Race-IAT was measuring our participants' attitudes as expected. The average IAT score across all prime conditions was -0.27 ($SD = 0.36$) indicating an overall preference for European Americans. For European Americans, the average IAT score was -0.39 ($SD = 0.30$) indicating a preference for their own race. African Americans, on the other hand, had an average IAT score of 0.08 ($SD = 0.31$) indicating a slight preference for their own race or, at least, a failure to exhibit the IAT effect. An ANOVA was run comparing European American and African American participant scores and a significant difference was found, $F(1, 294) = 140.05$, $p<0.01$. The η_p^2 (partial eta squared) of 0.32 indicates a strong relationship between the race of the participant and the mean IAT score. This finding is contrary to previous IAT research which has illustrated that, regardless of the race of the participant, a preference for European Americans is found (Dasgupta & Greenwald, 2001).

Hypothesis Testing

Before any hypothesis testing was conducted, an ANOVA was run to determine if our control condition differed from any of our other conditions. Thus, in this analysis CONDITION was the Independent Variable, and the condition was either the control or a combination of the independent variables [e.g., European American prime, positive and counter-stereotypic (EA + CS), or African-American prime, negative, stereotypic (AA - S)]. This was done because a full factorial ANOVA could not be used because the control condition was not balanced across all IVs (e.g., there was not a European American, Positive, Control condition). The ANOVA yielded no significant differences between our conditions, $F(8, 286) = 0.39$, p = NS. Means and standard deviations can be found in Table 2. Conditions in Table 2 are ordered by those showing the strongest to weakest IAT effect. Note, however, that all conditions have negative means, and thus still exhibited the IAT effect despite the prime condition.

Table 2

Means and Standard Deviations for Conditions

Prime	*M*	*SD*
AA + CS	-0.33	0.43
EA - CS	-0.36	0.31
EA + CS	-0.31	0.37
EA - S	-0.28	0.37
EA + S	-0.26	0.38
AA - S	-0.26	0.35
Control	-0.23	0.39
AA - CS	-0.23	0.37
AA + S	-0.22	0.33

Note: EA + CS= Positive and counter-stereotypic European American, EA - CS= Negative and counter-stereotypic European American, EA + S= Positive and stereotypic European American, EA - S= Negative and stereotypic European American. AA + CS= Positive and counter-stereotypic African American, AA - CS= Negative and counter-stereotypic African American, AA + S= Positive and stereotypic African American, AA - S= Negative and stereotypic African American. A positive score = preference for African Americans, a negative score = preference for European Americans.

Further to determine whether the any means within our prime conditions were significantly different from one another, post-hoc LSD analyses were conducted. Results of these analyses indicated that none of the means are significantly different from one another.

Next, an ANCOVA was conducted with participant race used as a covariate to determine whether there were any main effects or interactions for the independent variables while controlling for participant race. Our control condition was not included as it was found to not differ significantly from our other conditions and exclusion of the control would mean the design - for the purposes of analyses - was a full factorial design. In our ANCOVA, the independent variables were the valence of the exemplar profile (positive vs. negative), the stereotypicality of the exemplar profile (stereotypic vs.

counter-stereotypic), and the race of the exemplar profile (African American vs. European American). The dependent variable was the mean Race-IAT score. The results of the ANCOVA yielded neither a main effect for valence, $F(1, 261) = 0.28$, $p = NS$, nor a main effect for stereotypicality, $F(1, 261) = 0.80$, $p = NS$. However, one wouldn't necessarily expect there to be any significant main effects of valence and stereotypicality on a race-dependent DV without taking race of exemplar prime into consideration. Thus, two way interactions were expected. However, unfortunately, none were obtained for valence x prime race, $F(1, 261) = 0.09$ $p = NS$, or for stereotypicality x prime race, $F(1, 261) = 0.13$, $p = NS$. The only significant main effect was found for the covariate of race of the participant, $F(1, 261) = 131.31$, $p < 0.01$, $\eta_p^2 = 0.34$.

With reference to the anticipated three-way interactions between our variables, it was hypothesized that there would be a synergistic interaction of the valence, stereotypicality, and race of the exemplar prime, such that if participants were presented with a more positive, less stereotypical African American exemplar, the IAT score would be more pro-African American. No significant interaction was found for this combination of variables, $F(1, 261) = 3.06$, $p = NS$. Moreover, no other remaining interactions were significant in examining valence x stereotypicality, $F(1, 261) = 1.41$, $p = NS$. The findings failed to support any of our hypotheses. Again, a LSD means comparison was conducted to determine whether any significant differences existed between the conditions in the anticipated three way interaction (valence x stereotypicality x race of prime). As can be seen in Figure 4, the positive stereotypic African American prime was one of the only

means that was significantly different than the means of the other conditions such that this condition showed the least evidence of the IAT effect.

Figure 4

Means comparison for 3-Factor ANCOVA
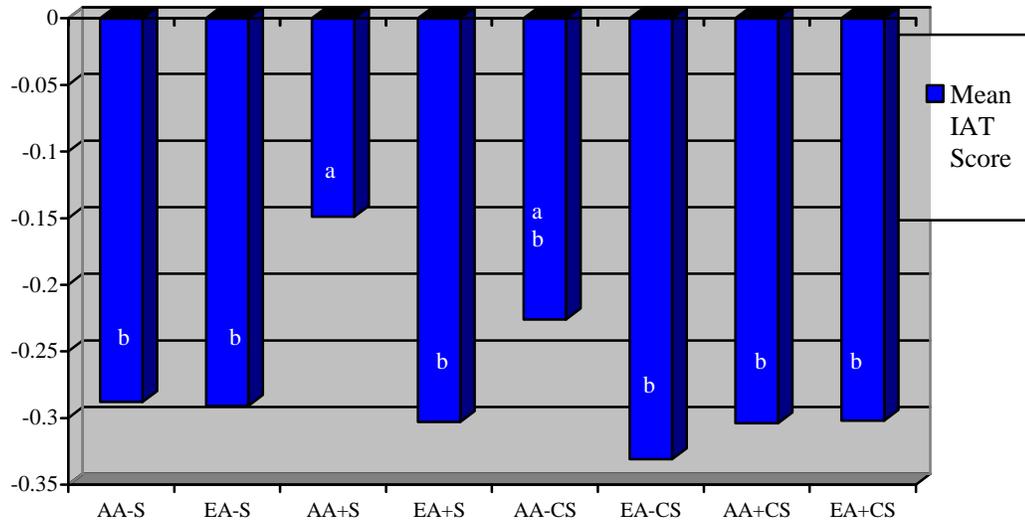
Note: EA + CS= Positive and counter-stereotypic European American, EA - CS= Negative and counter-stereotypic European American, EA + S= Positive and stereotypic European American, EA - S= Negative and stereotypic European American. AA + CS= Positive and counter-stereotypic African American, AA - CS= Negative and counter-stereotypic African American, AA + S= Positive and stereotypic African American, AA - S= Negative and stereotypic African American. Bars with unique subscripts are significantly different from one another.

Given that the race of the participant was a significant covariate, a follow-up 3-Factor ANOVA was conducted for each racial group (i.e., one with just European American participants and one with just African American participants) to see if any effects were dependent upon the race of the participant. The dependent variable was mean Race-IAT score while the IVs were stereotypicality, valence, and the race of the exemplar prime. These analyses yielded no significant findings. For European

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Americans participants: stereotypicality, $F(1, 191) = 0.69$, $p = $ NS; valence, $F(1, 191) = $ 0.06, $p = $ NS; prime race, $F(1, 191) = 1.26$, $p = $ NS; stereotypicality x valence, $F(1, 191) = 1.25$, $p = $ NS; stereotypicality x prime race, $F(1, 191) = 1.80$, $p = $ NS; valence x prime race, $F(1, 191) = 0.08$, $p = $ NS; and stereotypicality x valence x prime race, $F(1, 191) = 2.76$, $p = $ NS. For African American participants: stereotypicality, $F(1, 55) = 0.02$, $p = $ NS; valence, $F(1, 55) = 0.11$, $p = $ NS; prime race, $F(1, 55) = 1.86$, $p = $ NS; stereotypicality x valence, $F(1, 55) = 0.00$, $p = $ NS; stereotypicality x prime race, $F(1, 55) = 3.16$, $p = $ NS; valence x prime race, $F(1, 55) = 0.02$, $p = $ NS; and stereotypicality x valence x prime race, $F(1, 55) = 0.01$, $p = $ NS.

Lastly, two final analyses were run to explore whether race of participant affected the original ANOVA conducted including the control condition. Two separate ANOVAs were conducted (one for European Americans and one for African Americans) with CONDITION, again, as the IV. Thus, the condition was either control or a combination of the independent variables [e.g., European American prime, positive and counter-stereotypic (EA + CS), African American prime, negative, stereotypic (AA - S)]. These results are represented graphically in Figure 5. Although, overall, the means were more similar than alike, $F(8, 211) = 1.12$, $p = $ NS, for European Americans, a follow-up means comparison with LSD revealed that, the African American, positive, stereotypic [AA + S] prime condition ($M = -0.26$, $SD = 0.30$) differed significantly from all other prime conditions at the $p < .05$ level such that the AA + S condition showed the least IAT effect within our group of European American participants (i.e., was the condition which showed the most preference for African Americans). For African Americans, the sample

sizes were likely too small within each cell to yield significant differences, $F(8, 66) =$ 0.67, $p = $ NS. Thus, not surprisingly, the follow-up LSD comparisons with just the African American sample showed that none of the prime conditions differed significantly from each other.

Figure 5

Estimated marginal means of mean IAT scores by prime condition
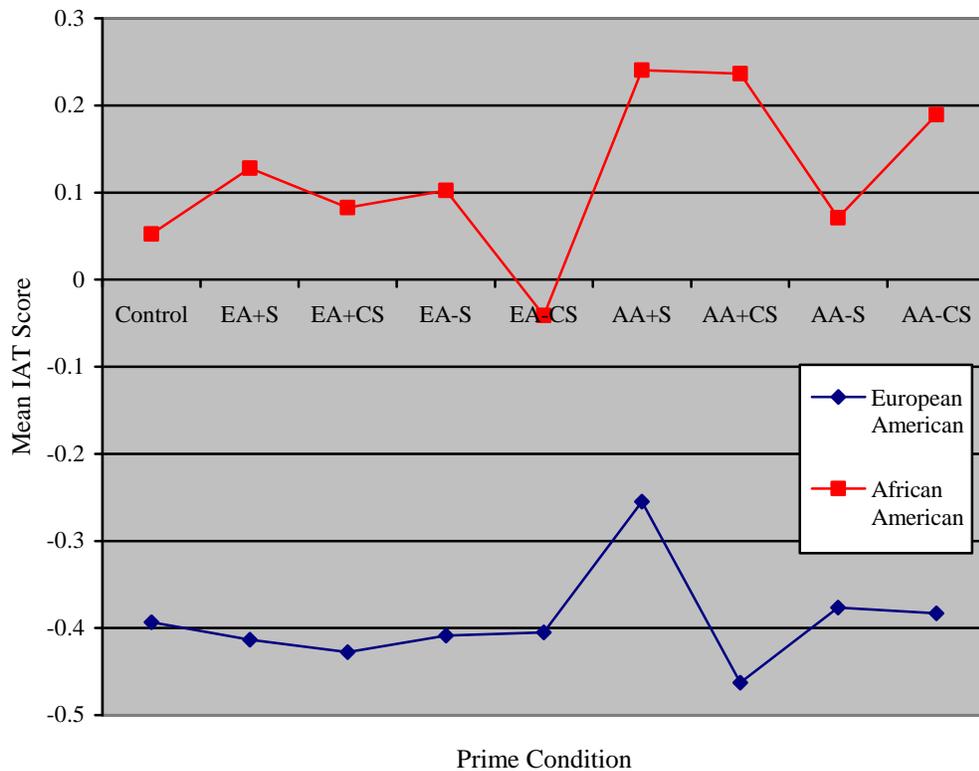
Prime Condition

Note: EA + CS= Positive and counter-stereotypic European American, EA - CS= Negative and counter-stereotypic European American, EA + S= Positive and stereotypic European American, EA - S= Negative and stereotypic European American. AA + CS= Positive and counter-stereotypic African American, AA - CS= Negative and counter-stereotypic African American, AA + S= Positive and stereotypic African American, AA - S= Negative and stereotypic African American.

It is possible that one reason for the non-significant findings could be due to participants forgetting the race of the exemplar prime before completing the IAT. As such, a manipulation check was conducted in which the profiles our participants had rewritten from memory were coded as to whether or not the race of the exemplar was identified correctly, incorrectly, or not at all. Those participants who did not identify the race of the exemplar prime or identified the race of the exemplar prime incorrectly were excluded. In all, 29 participants were excluded and all aforementioned analyses were rerun. The removal of participants who did not mention race or incorrectly identified the race of the exemplar prime did not affect the overall Race-IAT score. With regards to the ANCOVA in which race of the participant was entered as a covariate, excluding participants who did not or incorrectly identified the race of the participant yielded no significant changes. When the two separate 3-Factor ANOVAs were conducted with the removal of participants who did not or incorrectly identified the race of the exemplar prime, the results yielded no significant changes.

Results Summary

In conclusion, a majority of our hypotheses were not supported. The hypothesized IAT effect was found, overall. However, neither combination of valence and exemplar race nor stereotypicality and exemplar race produced any significant effects in any of our analyses. Further, the hypothesized combination of stereotypicality, valence, and race of the exemplar prime produced no significant effects in any of our analyses.

With reference to some of our more unexpected findings, a main effect was found for the race of the participant when it was held as a covariate. When an ANOVA was

conducted, the two races were shown to have a preference for their own race, though this preference was not as strong in African Americans as it was in European Americans. Yet, race of participant did not interact with any of the IVs to create differences between the experimental conditions. Thus, even when the two 3-Factor ANOVAs were conducted – one for each race – no significant differences were found. Moreover, to ensure participant had correctly remembered the race of the exemplar prime they had been issued, a manipulation check was conducted and participants who had incorrectly identified the race of the participant or had not identified the race of the participant were excluded and all analyses were reran. Excluding these participants yielded no findings that were significantly different for findings in which these participants were included.

CHAPTER IV

DISCUSSION

In this experiment I expected the standard IAT effect to be found (i.e., an overall preference for European Americans). Consistent with past research, I expected effects of both valence and stereotypicality *within* the race of the exemplar, such that if presented with either a more positive or counter-stereotypical African American exemplar, the IAT score elicited would be more pro-African American. Likewise, if presented with a positive or counter-stereotypic European American exemplar, I expected the IAT scores elicited might be more pro-European American. I thus expected the greatest impact on IAT scores to be evident when valence, stereotypicality, and exemplar race were combined, with the smallest IAT effect being elicited for the positive, counter-stereotypic, African American exemplar. Lastly, whether the race of the participant would affect IAT scores in light of the priming methods used was explored.

The IAT and Participant Race Effects

In the case of this Race-IAT, a more negative score indicated a preference for European Americans (i.e., the IAT Effect). Overall, the hypothesized IAT Effect was found. Whether the race of the participant would affect the outcome of this Race-IAT was also explored. Unexpectedly, while the hypothesized IAT effect was found, closer

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inspection of the data indicated that there was a significant difference between the scores of our European American and African American participants. When a Univariate ANOVA was conducted and the two racial groups were compared, there was a significant difference in the mean IAT scores between African Americans and European Americans. In this study, African Americans showed a slight preference for their own race. Moreover, when the race of the participant was included in analyses as a covariate, it was the only variable for which a significant main effect was found. However, when a follow-up 3-Factor ANOVA was conducted for each racial group to determine whether any effects were dependent upon the race of the participant, no significant effects were found.

Also, to determine whether participant race may have affected the original ANOVA that was conducted between our prime groups, including the control condition, a second ANOVA was conducted between each racial group of participants. For European American participants, no significant differences were found between the different prime conditions. However, follow up LSD means comparisons indicated the positive and stereotypic African American prime differed significantly from all other groups. The AA + S prime actually elicited one of the highest IAT scores within our group of European American participants, indicating it was the condition which was the most pro-African American. With regards to the African American participants, no significant differences were found between the prime groups and follow up LSD means comparisons indicated no significant difference between the prime conditions.

The significant difference between European Americans and African Americans was unanticipated because at the time that this study was proposed and conducted, no

other research had suggested any kind of participant race effect for the Race-IAT.

However, after consulting with key IAT researchers as to the validity of our findings, a

study was found that offered support for our finding that the race of the participant had a

significant effect on IAT results (Nosek et al., 2007). In 2000, the IAT's originators

created a website (http://implicit.harvard.edu) to increase public awareness about the

Implicit Association Test. When a member of the public visited this website, they had

the opportunity to act as a participant and complete a number of different IATs. A Race

IAT similar to the one used in this study was one of the IATs that was offered. In 2007,

researchers published a meta-analysis of all the data that had been collected by this

website between July 2000 and May 2006. In all, 762,881 individuals completed the

Race-IAT on the Project Implicit website. In this study, a more positive score indicated a

preference for European Americans while a more negative score indicated a preference

for African Americans. Overall, a preference for European Americans was found ($M =$

0.37, $SD = 0.43$, $d = 0.86$)[5]. However, when the different racial groups were looked at

separately, it was found that African Americans showed a slight preference for their own

race ($M = -0.05$). Moreover, European Americans showed the strongest preference for

European Americans when compared to all other racial groups ($M = 1.00$). The other

racial groups identified in this study—Asian/Asian American, American Indian,

Hispanic, Multi-ethnic, or Other—also showed a preference for European Americans.

However, these scores were not as extreme and ranged from $M = 0.56$ to $M = 0.88$.

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[5] *Note*: In this case IAT scores had been calculated in a slightly different way. In this study, a
more positive score indicated more of a preference for European Americans.

Although previous research has suggested that, regardless of race, participants will show a preference for European Americans (Greenwald, Mcgee, & Schwartz, 1998), those previous studies had used a smaller sample of African Americans than was used in the present research or in Nosek et al. (2007) Project Implicit study. Indeed, of the over 750,000 participants who participated in the Project Implicit study, only 6.7% were African American. In our study, 24% of our 295 participants were African American. As such, the significant impact of participant race could be the result of a larger sample of African Americans in both these studies whereas in most studies of the IAT the sample is either exclusively European American or African Americans make up a very small percentage.

Another hypothesis as to why these results were found could have to do with geographical location. The participant race effect size found in the present study (partial eta^2) of 0.323 is much larger in comparison to an effect size (partial eta^2) of 0.087 which was found in the Project Implicit study (Nosek et al., 2007). The greater effect size found in this study could be the result of study location. The majority of IAT studies were conducted in non-Southern portions of the United States. It could be that the preference I found for an individual's own race, and the large effect size in comparison to the Project Implicit results, is due to the level of racial identity in Southern African Americans attending a college where there is a larger African American community than in a typical college in the United States.

To date the interaction between racial identity and the IAT has only been examined in a few dissertations (Brega, 1999). Such studies have suggested that the Race

IAT may be measuring the level of an individual's racial identity. When an individual who strongly identifies with his or her race is asked to evaluate someone of their race, it is like asking them to evaluate themselves. And, as people typically judge themselves in a positive way, it is not surprising that individuals who strongly identify with their race would judge others of that race as more positive than negative. It may be that the African Americans that were sampled in this study, students of Mississippi State University, had a higher level of racial identity then African Americans sampled in previous IAT studies. Thus, due to this increased level of racial identity, African Americans in this study scored more pro-African American than had previously been found in Race IAT studies (e.g., Brega, 1999).

Another explanation could be that the difference in IAT scores among African American participants isn't necessarily due to a greater liking of African Americans but potentially a greater dislike of European Americans than found in the rest of the country. The South has a history of racial tensions, segregation, and blatant racism which may have led to a greater mistrust of European Americans by Southern African Americans that reduces an automatic association of "white" with "good." Given the scoring of the IAT (i.e., where preferences for white are on the opposite end of the continuum from preferences for black), it is impossible to know whether the variations in the scores obtained in the present study are due to more positive attitudes about African Americans or more negative attitudes about European Americans. Thus, further testing is needed.

Two-way Interactions: Effects of Valence x Exemplar Race & Stereotypicality x Exemplar Race

Another two hypotheses of this study concerned expected interactions for valence and exemplar prime as well as with regard to stereotypicality and race of the exemplar. Note, it was not expected that stereotypicality or valence of the exemplar prime alone would produce any significant change in IAT scores. After all, main effects do not take the race of exemplar prime into consideration. One would expect, for example, that although a positive European American exemplar would result in a preference for European Americans, a positive African American exemplar would create the opposite effect (i.e., a preference for African Americans). Thus, collapsing across race of exemplar prime would average out these potentially polar opposite scores.

Accordingly, rather than main effects of valence and stereotypicality, it was anticipated that there would be significant two way interactions between valence and exemplar race, as well as between stereotypicality and exemplar race. In particular, it was expected that if presented with either a more positive or counter-stereotypical African American exemplar, the IAT score elicited would be more pro-African American. After all, such a conclusion would be consistent with past literature that showed that presenting individuals with counter-stereotypical women reduced the gender IAT effect (Blair, Ma, & Lenton, 2001; Coats & Smith, 1999). Likewise, presenting individuals with positive African American exemplars had also been found to reduce the race IAT effect (Dasgupta & Greenwald, 2001). However, in our study, neither interaction proved to be significant. Moreover, when race of the participant was held as a

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covariate and when separate 3-Factor ANOVAs were run for each racial group of participants, no significant two way interactions were found between valence and the exemplar prime and stereotypicality and the exemplar prime. Accordingly, the fact that neither stereotypicality nor valence of our exemplar prime in combination with the race of the exemplar prime elicited no significant effects runs contrary to the aforementioned similar studies.

The counter-stereotypic vs. stereotypic effects had only been tested, and found, with regard to the Gender IAT, so potentially, the failure of our study to clearly replicate the effects of stereotypic vs. counter-stereotypic exemplar effects may be due to the difference in DV. After all, the Gender IAT assesses automatic associations between women and men with certain types of majors (e.g., liberal arts vs. science). In contrast, the Race IAT assesses automatic associations between African Americans and European Americans with certain types of words (e.g., negatively valenced words vs. positively valenced words). Thus, manipulations of stereotypicality may be more strong for gender because the gender IAT may be more cognitive and the race IAT more affective.

However, the failure for the positive vs. negative valence of exemplar to affect results on the IAT doesn't necessarily support the race IAT as a more affective measure. The null findings also run contrary to Dasgupta and Greenwald's (2001) study, where they found priming participants with positive/negative exemplars in combination with the race of the exemplar would cause effects such that IAT scores would be changed. However, in these studies, famous or well-known individuals were often used as the exemplar primes. For example, in the Dasgupta and Greenwald (2001) study, Denzel

Washington was used as a positive African American exemplar. It is possible that the

individual such as Denzel Washington or Jeffery Dahmer are better 'ingrained' in the

minds of individuals in our society and, as such, it would be easier for people to access

associated positive or negative feelings. This 'easier accessibility' could be the reason for

the IAT changes reported in the Dasgupta and Greenwald studies. To put it more

succinctly, it could just be easier for individuals to replace the African American

stereotype with Denzel Washington because they feel they 'know him' more so than they

would relate to a generic story about a random African American male. It should be

noted that, as can be seen in Appendix D our primes were rated as more negative when

they were a negative prime and more stereotypic when they were a stereotypic prime.

Nonetheless, it could be that the primes in this study may have only elicited thoughts of a

generic sub-category of an African American (e.g., entertainer) as opposed to an actual

exemplar (e.g., Denzel Washington).

Caveats

In light of these somewhat counter-intuitive findings, a major caveat of this study

seems to be the exemplar primes themselves. While conducting a study similar to this,

Dasgupta and Greenwald (2001) had used well-known figures as their exemplar primes.

This study used generic examples of different African Americans and European

Americans. As explained in the Appendix C, I had initially tried to use famous or well

known individuals as our exemplar primes but was unable to get participants to agree

which individuals were stereotypic or counter-stereotypic. As such, it seems that our

method did not have enough of an impact on our participants. In the future, perhaps more

strenuous pilot testing could yield more clear indications as to which famous individuals

participants feel are stereotypic of their race or not. Also, if a more generic priming

method such as the one used in this study is to be employed again, perhaps helping the

participant 'get to know' the prime better would cause the changes one would expect to

see in light of past research. For example, providing pictures of our primes that went

along with their descriptions or having participants interact with confederates playing

each role may help

Implications

Regardless as to whether or not previous findings were supported, this study

offers evidence that the Race-IAT is not as well understood as previously thought. With a

larger sample of African Americans than has been used in previous research, save the

Project Implicit study (Nosek et al., 2007), I saw the race of the participant had a

significant effect on our results. While this finding may not necessarily refute the validity

of the Race-IAT as a measure of implicit cognition, it does highlight a gap in the

research. While the Project Implicit study did find a significant effect for the race of the

participant, the effect was relatively weak in comparison to this study. The present study

appears to be one of the first that has used an even remotely representative sample of

African Americans. It could be that, for sheer lack of numbers, previous studies have not

found a participant race effect as strong as the one found here. It might also be that, by

sampling African Americans in the Southern United States, which is arguably more

segregated and collectivistic than other parts of the country, I have tapped into a

population with a stronger African American identity (Vandello & Cohen, 1999). In

regions where other Race-IAT studies have been conducted (predominately Universities in the Eastern and Northeastern region of the United States) African Americans were significantly outnumbered by European Americans with African-Americans making up, at most, approximately 7% of the sample (Nosek et. al., 2007), if they were present at all. Moreover, African American participants living and attending universities in the Eastern or Northeastern region of the US are living in a more predominately European American culture than students living in the Southern region of the United States. As such, the presence of a more salient African American culture in the southern part of the United States may lead to stronger racial identification and a stronger level of racial identity. Thus, race differences in the IAT could be dependent upon the level of racial identity of the individuals taking the test.

While the answers to many of the questions that had been asked at the beginning of this study have not been answered, one thing is evident; more work is needed to be done before we can understand the underlying mechanisms that are affecting Race-IAT scores. Perhaps when we have parsed out how all the different factors mention in this study can influence people's implicit attitudes about their own and different racial groups, we can begin to discover how to change those attitudes. However, the underlying mechanisms affecting implicit stereotyping and prejudice may not be as black and white as previously thought.

REFERENCES

Blair, I. V., Ma, J. E., & Lenton, A. P. (2001). Imagining stereotypes away: The moderation of implicit stereotypes through mental imagery. *Journal of Personality and Social Psychology, 81(5),* 828-841.

Brega, A. G. (1999). Representation of race and gender in the self (Doctoral dissertation, University of Colorado-Boulder, 1999). *Dissertation Abstracts International, 60 (1-B),* 409.

Coats, S., & Smith, E. R. (1999). Perceptions of gender subtypes: Sensitivity to recent exemplar activation and in-group/out-group differences. *Personality and Social Psychology Bulletin, 25(4),* 515-526.

Dasgupta, N., & Greenwald, A. G. (2001). On the malleability of automatic attitudes: Combating automatic prejudice with images of admired and disliked individuals. *Journal of Personality and Social Psychology, 81(5),* 800-814.

Dasgupta, N., McGhee, D. E., Greenwald, A. G., & Banaji, M. R. (2001). Automatic preference for white Americans: Ruling out the familiarity effect. *Journal of Experimental Social Psychology, 36,* 316-312.

Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56(1),* 5-18.

Greenwald, A. G., & Banajij, M. R. (1995). Implicit social cognition: Attitudes, self esteem and stereotypes. *Psychological Review, 102,* 4-27.

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology*, *85*, 197-216.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology, 74,* 1464-1480.

Nosek, B. A., Greenwald, A. G., & Banaji, M. R. (2007). The Implicit Association Test at age 7: A methodological and conceptual review. In J. A. Bargh (Ed.), *Automatic Processes in Social Thinking and Behavior*. Psychology Press.

Nosek, B. A., Smyth, F. L., Hansen, J. J., Devos, T., Linder, N. M., Ranganath, K. A., et al. (2007). Pervasiveness and correlates of implicit attitudes and stereotypes. *European Review of Social Psychology* ,*18*, 36-88.

Ottaway, S. A., Hayden, D. C., & Oakes, M. A. (2001). Implicit attitudes and racism: Effect of word familiarity and frequency on the Implicit Association Test. *Social Cognition, 19,* 97-114.

Smith, E. R., & Zarate, M. A. (1990). Exemplar and prototype use in social categorization. *Social Cognition, 8(3),* 243-262.

Smith, E. R., & Zarate, M. A. (1992). Exemplar-based model of social judgment. *Psychological Review, 99(1),* 3-21.

Vandello, J. A., & Cohen, D. (1999). Patterns of individualism and collectivism across the United States. *Journal of Personality and Social Psychology, 77(2),* 279-292.

APPENDIX A

EXPERIMENT CONSENT FORM

COMPUTER LEARNING

You are invited to participate in a study that seeks to determine if people learn as well using a computer as they do using printed material. As a participant in this study, you will complete two short tasks in order to compare how well you have learned using the different types of materials. We ask that you read this form and ask any questions you may have before agreeing to be in this study. This study is being conducted by Ashley Walker, Department of Psychology.

Background Information:
The purpose of this study is gain information on how people learn using a computer. Some people are pushing for a move to online textbooks that you can download to your computer and use. However, we don't know if people will learn as well this way. The purpose of this study it to determine if people learn any differently or as well when using a computer.

Procedures:
If you agree to this study you will be asked to perform one memorization task using printed material and one matching task using a computer. You are given an hour to complete both tasks.

Risks and Benefits of Being in the Study:
There are no perceived risks for participating in this study. However, if any unpleasant memories are raised you are encouraged to contact the University counseling services at 662-325-2091. For completion of the survey you will receive 1 point.

Confidentiality:
The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be kept in a locked file; only researchers will have access to the records. A code number will be used to identify participants. This code number will only be released to investigators in this study.

Voluntary Nature of the Study:
Your decision whether or not to participate will not affect your current or future relations with Mississippi State University. If you decide to participate, you are free to withdraw at any time without affecting this relationship. If at any point during the study you need to withdraw, you will receive the standard 1 credit point for this study.

Contact and Questions:
The researcher conducting this study is Ashley Walker. You may ask any questions you may have now. If you have questions later, you may contact them at aw299@msstate.edu

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), contact IRB at (662) 325-3294. You will be given a copy of this form to keep for your records.

Statement of Consent:
I have read the above information. I have asked questions and received answers. I consent to participate in the study.
Signature _____ **Date** _____
Signature of Investigator _____ **Date** _____

APPENDIX B

APPROVAL LETTER FROM THE INSTITUTIONAL REVIEW BOARD

MISSISSIPPI STATE
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Compliance Division
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compliance@research.msstate.edu
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July 20, 2009

Ashley Walker
Psychology
Mailstop 9514

RE: IRB Study #05-329: In the Eye of the Beholder: The Effects of Racial Exemplars on Implicit Attitudes

Dear Ms. Walker:

This letter is to confirm that the above referenced project was reviewed and approved via expedited review for a period of 1/30/2006 through 1/15/2007 in accordance with 45 CFR 46.110 #7. Please note the expiration date for approval of this project is 1/15/2007. If additional time is needed to complete the project, you will need to submit a Continuing Review Request form 30 days prior to the date of expiration. Any modifications made to this project must be submitted for approval prior to implementation. Forms for both Continuing Review and Modifications are located on our website at http://www.orc.msstate.edu.

Any failure to adhere to the approved protocol could result in suspension or termination of your project. Please note that the IRB reserves the right, at anytime, to observe you and any associated researchers as they conduct the project and audit research records associated with this project.

Please refer to your docket number (#05-329) when contacting our office regarding this project.

We wish you the very best of luck in your research and look forward to working with you again. If you have questions or concerns, please contact Christine Williams at cwilliams@research.msstate.edu or call 662-325-5220.

Sincerely,

[For use with electronic submissions]

Christine Williams
IRB Compliance Administrator

APPENDIX C

PILOT STUDY 1: PERSONALITY ATTRIBUTES SURVEY

In this pilot study, I sought to determine which attributes individuals judged to be positive and negative. Participants were asked to rate a series of 16 personality attributes (e.g., laid-back, violent) on a scale ranging from -3 to +3. A score of -3 indicated that participants would judge an individual with the personality attribute in question very negatively while a score of +3 indicated that the participant would judge an individual with that attribute very positively. The attributes listed in this scale were taken from a previous study on stereotyping and prejudice in which they had been used to describe common stereotypes of African Americans (such as: musical, lazy) and European Americans (such as: sheltered, successful) (Devine, 1989). An example of a question from this scale is as follows; for a copy of the scale, see Appendix E:

If you were told someone was **musical** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

The purpose of this pilot test was to determine which stereotypic adjectives participants judged to be neutral as well as which were viewed the most positive and most negative (e.g., which had the highest positive and negative scores on average, with the smallest standard deviation). This process helped to identify the adjectives later used to describe the exemplar.

This study was administered online via Sona-Systems. Any participant eligible to participate in experiments via the Sona-Systems website was able to take the survey. In order to complete this survey, participants had to sign up on the Sona-System's website.

Upon signing up, participants were given access to the survey which they had to complete in one sitting. All items were presented in a random order (e.g., some rated "athletic" first and others "wealthy"). Participants were awarded 0.5 research participation points for their completion of the questionnaire.

Fourty-one[6] undergraduate students were recruited from introductory psychology classes for this study; the age of participants in this study ranged from 18 to 50 years of age. The mean age was 24.44 years while the median age was 21 years. Of these participants, 80% were male and 20% were female[7]. Fifty-six point one percent of our participants were African American while 39% were European American[8]. The remaining two participants identified themselves as Asian American or Middle Eastern.

Results from this study can be seen below in Table 3. As can be seen in this table, a majority of our attributes were classified positively with the exception of 'violent'. The most positively viewed adjectives were educated, successful, focused and organized, which were adjectives associated with European Americans in previous research (Devine, 1989). The more negatively viewed adjectives were streetwise, sheltered and violent. Sheltered was associated with European Americans while streetwise and violent were associated with African Americans in previous research. The remaining adjectives fell somewhere in the middle of our scoring range. The majority of these adjectives were associated with African Americans (athletic, musical, cool, expressive, laid back). While

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[6] One participant was dropped from analysis due to lazy responding,

[7,8] As is evident, these numbers are contrary to usual findings in which there are typically more women and more European Americans who participate in these types of experiments. These findings may be due to the fact that this survey was offered online.

industrious, informed and wealthy were adjectives associated with European Americans.

Results from this study helped us determined which of the adjectives that were already

proven to be common stereotypes of a specific racial group were viewed as positively or

negatively by the public. Other adjectives, that will be mentioned later, were obtained by

using antonyms of the common stereotypes identified by Devine (1989) as well as

adjectives the experimenters felt might be useful in describing either stereotypic or

counter-stereotypic exemplars for each race. This knowledge helped us determine, then,

what traits our exemplar primes should have in order to be judged as desired.

Table 3

Mean Personality Attributes Scores

Personality Attributes	*M*	*SD*
Educated	2.15	1.35
Successful	2.12	1.36
Focused	2.0	1.45
Organized	1.93	1.31
Industrious	1.68	1.19
Informed	1.61	1.34
Athletic	1.59	1.45
Musical	1.59	1.26
Cool	1.56	1.16
Expressive	1.44	1.38
Laid back	1.17	1.36
Wealthy	1.17	1.16
Competent	1.07	1.56
Streetwise	0.73	1.43
Sheltered	0.22	1.74
Violent	-1.71	1.78

Note: A higher score indicates a more positive view of an individual with the personality attribute listed. A lower score indicates a more negative view. Scores could range from -3 to +3.

APPENDIX D

PILOT STUDY 2: PROFILE CHECK SURVEY

In a second pilot survey, 86 participants were recruited from introductory psychology classes and were given credit toward fulfillment of their course requirements for participation. This study was conducted to ensure participants rated our fictitious profiles as required. For example, I wanted to be sure the profile of a stereotypic and positive African American was being rated as stereotypic and positive by participants. Of these participants, the age ranged from 17 to 24 years old. The mean age of participants was 18.62 years, SD = 1.05. Of those participants, 67% were female and 33% were male. The majority of participants were either European American (77%), or African American (20%). The remaining 3% of the participants classified themselves as Hispanic/Latino(a) or American Indian/Alaskan Native.

For the Profile Check Survey used in this study, any participant eligible to participate in experiments via the Sona-Systems website was able to take the survey. In order to complete the survey, participants had to sign up in one of the designated time slots. Upon signing up, participants were given access to one of eight profiles surveys which they had to complete at once. To ensure only one profile was evaluated by each participant, the profile survey that the participant was allowed to complete was based on the last digit of their student number. For example, if a participant had a student ID number that ended with the number three, they would only have access to the survey featuring profile number three. Participants were told that the survey they were completing was looking at how personalities may change during the transition from high school to college. Participants were asked to read a short description about an individual and then fill out a survey. All questions were presented in a random order. After

completion of the survey, and a short demographics questionnaire, participants were thanked for their participation and credit was administered by the website.

After reading each profile, participants were asked to rate the fictitious individual on a series of personality attributes responded to on a semantic differential scale. There were 27 items, and thus 54 characteristics, on the personality attribute scale. For example the attributes 'dorky' and 'cool' were paired together as well as the words, 'irresponsible' and 'responsible.' Each item was anchored with a positive adjective on one end and a more negative attribute on the opposite pole. This allowed us to determine whether the profile exemplar was rated as more negative (e.g., had more negative attributes assigned to him) or more positive. Moreover, the positivity and negativity of the exemplar was determined by simply having participants rate whether they thought the person in the profile was more negative or more positive on a semantic differential scale.

dorky…..1…..2…..3…..4…..5…..6…..7…..cool

Scores on each scale could range from one to seven. A score of one indicated that the participant judged the individual in the profile as possessing the attribute located on the left side of the scale while a score of seven indicated that the participant judged the individual as possessing the attribute located on the right side of the scale.

Further, also included amongst the 27 items were the adjectives identified by Devine (1989) as stereotypic of African Americans and European Americans. These items were included to ensure that stereotypic traits were assigned to stereotypic exemplars but not to counter-stereotypic exemplars. Depending on where the adjective fell on the scale (i.e., left or right side) either a one or a seven could denote

stereotypicality. For example, if the item from the survey in question had the adjective 'musical' on the left side and 'non-musical' on the right, a score of one would be considered stereotypic for a stereotypic African America exemplar. A score of seven on the other hand, would be considered stereotypic for a stereotypic European American exemplar. In the case of ensuring our profiles exemplified the characteristics that were being manipulated (i.e., musicality, athleticism) the adjectives in question that fell to the left side of our scale were required to have an average score of 3 or below to ensure participants judged the profile as embodying that quality.   Adjectives on the right side of our scale that received an average score of greater than 5 were concluded to be a feature that was part of the profile. This procedure was repeated and the profiles were edited until it was certain that the profiles successfully manipulated the independent variables of interest (i.e., the positive and counter-stereotypic exemplars were rated as such). For a copy of the profiles as well as the semantic differential personality attributes scale, see Appendix F and G respectively.

Figure 5 is a table of the attributes that each profile was determined to need while Tables 4 and Table 5 illustrates how participants rated the different profiles on the attributes listed in Figure 5. As discussed earlier, the positivity and/or negativity of the various personality attributes were identified in our initial pilot study; see Appendix C for results. Also, the attributes listed had been identified as stereotypic of a particular racial group by previous work conducted by Devine (1989).

European American Primes

Given previous findings, I aimed to have our positive and stereotypic European American exemplar score high on the attributes that identified them as 'educated' and 'motivated' but low on attributes that identified them as 'privileged' and 'superior.' As hoped, our positive and stereotypic European American exemplar was rated as organized, industrious and informed as well as ambitious, responsible, focused and hard working. Participants did not identify this exemplar with any attributes that would be perceived as indicating superiority. In addition to the attributes mentioned previously, our positive and stereotypic European American prime was also identified as non-violent and non-threatening. They were also rated as more positive than negative on our semantic differential scale ($M = 3.00$, $SD = 0.94$). Here positivity anchored the left side of the scale and as such lower scored indicated positivity.

I expected the positive and counter-stereotypic European American exemplar to score high on attributes that identified them as 'musical' and 'athletic' but low on attributes that identified them as 'educated', 'driven', 'snobby', and 'privileged.' When participants rated this exemplar prime, they indicated they felt the exemplar was athletic, cool, streetwise, musical, and laid back. They also rated this exemplar as sensitive and unconcerned with material things. Participants did not rate the prime in any way that would indicate they perceived the positive and counter-stereotypic European American prime to be educated, driven, snobby, or privileged. The positive counter-stereotypic European American exemplar was rated more positive than negative ($M = 3.00$, $SD = 1.18$).

I wanted the negative and stereotypic European American prime to score high on attributes that would identify them as 'snob'/ 'superior' as well as the 'spoiled'/ 'privileged.' Participants rated this prime as insensitive, lazy, irresponsible, wealthy, boastful and materialistic as well as dependent and laid-back. The negative and stereotypic European American prime was rated as more negative than positive ($M =$ 4.91, $SD =$ 1.81). The 'negative' attribute anchored the right side of the positive/negative semantic differential scale. As such, higher scores indicated negativity.

The negative and counter-stereotypic European American prime was expected to be rated highly on the 'criminal' and 'lazy'/ 'poor' attributes but low on the 'educated', 'driven', 'snobby', and 'privileged' attributes. Participants rated the negative and counter-stereotypic European American prime as lazy, irresponsible, violent, aimless, streetwise, poor, ignorant, promiscuous, and stubborn. Participants did not rate the prime in a way that indicated they judged the prime to be educated, driven, or snobby. This prime was also judged to be more negative than positive ($M =$ 6.00, $SD =$ 0.77).

African-American Primes

With regards to our African American primes, I expected the positive and stereotypic African American prime to score high on attributes that identified them as 'musical' and 'athletic' but low on the attributes that identified them as 'poor' and 'criminal.' Indeed, when participants rated the positive and stereotypic African American prime they rated it as cool, musical, athletic, exciting and competitive. The prime was not rated in a way that indicated it was judged to poor or criminal. The

positive and stereotypic African American prime was also judged to be more positive than negative ($M = 2.40$, $SD = 1.07$).

Also, I expected the positive and counter-stereotypic African American prime to score high on attributes that indicated they were 'educated' and 'motivated' but low on attributes that identified them as 'criminal', 'poor', 'musical' and 'athletic'. Participants judged the positive and counter-stereotypic African American prime to be informed, ambitious, responsible, focused, and hard-working. This prime was also rated as sheltered, faithful, safe, conventional, non-violent, non-threatening and non-athletic. The positive and counter-stereotypic African American prime was rated as more positive than negative ($M = 2.83$, $SD = 1.53$).

Our negative and stereotypic African American prime was expected to score high on attributes that identified them as 'poor' and 'criminal'. Participants rated the negative and stereotypic African American prime as streetwise, poor, threatening and dangerous, as well as boastful, insensitive, lazy irresponsible, aimless, unorganized and stubborn. The negative and stereotypic African American prime was judged to be more negative than positive ($M = 6.00$, $SD = 1.15$).

The negative and counter-stereotypic African American prime was expected to score high on attributes that identified them as 'snob'/ 'superior', and 'spoiled'/ 'privileged' but low on attributes that identified them as 'criminal', 'poor', 'musical', and 'athletic.' When participants rated the negative and stereotypic African American prime, the exemplar was judged to be sheltered, insensitive, non-musical, irresponsible, wealthy, materialistic, boastful, lazy, dependent, non-athletic, stubborn and boring. This prime was

also rated as laid-back and ignorant and was rated more negatively than positively (=

5.09, *SD* = 1.14).

As mention earlier, Tables 4 and 5 illustrate how the different exemplars were

rated by our participants. For brevity's sake, only relevant descriptors are listed. Results

from this pilot study indicated to the experimenter that the exemplar profiles were indeed

eliciting the correct judgments from our participants. Previous research had indicated

that exemplar activation is automatic (Smith & Zarate, 1992) and that priming

participants with exemplars can effect IAT scores (Blair, Ma, & Lenton, 2001). As such,

these exemplars were used in order to determine what combination of our factors --

positive/negative, stereotypic/counter-stereotypic, African American/European American

-- might change Race-IAT scores.

	Positive		Negative	
	Stereotypic	Counter	Stereotypic	Counter
European American Exemplar	- Educated - Motivated (Not: Privileged, Superiority)	- Musically talented - Athletic (Not: Educated, Driven, Snobby, Privileged)	- Snob/ Superior - Spoiled/ Privileged	- Criminal - Lazy/Poor (Not: Educated, Driven, Snobby, Privileged)
African American Exemplar	- Musically talented - Athletic (Not: Poor, Criminal)	- Educated - Motivated (Not: Criminal, Poor, Musical, Athletic)	-Criminal - Poor	- Snob/ Superior -Spoiled/ Privileged (Not: Criminal, Poor, Musical, Athletic)

Note: The positivity and/or negativity of the traits listed were identified as such based on pre testing in the first pilot study; see Appendix C.

*Figure 6.*Profile attributes.

Table 4

Mean Personality Attributes Scores for European American Profiles

Profile	Personality Attributes	*M*	*SD*
EA + CS	*Positive*…Negative	3.00	1.18
	Athletic…Non-Athletic	2.27	0.90
	Dorky…*Cool*	5.09	1.04
	Industrious…Laid-back	5.09	1.38
	Insensitive…Sensitive	5.0	1.18
	Materialistic…Non-Material	5.00	1.41
	Non-…*Musical*	5.36	1.80
	Sheltered…Streetwise	5.09	1.45
EA - CS	Positive…*Negative*	6.00	0.77
	Aimless…Focused	2.45	1.57
	Flexible…Stubborn	5.64	1.21
	Informed…Ignorant	5.73	1.10
	Unmotivated…Ambitious	2.36	1.75
	Lazy…Hard-working	2.18	1.08
	Responsible…Irresponsible	1.82	0.75
	Sheltered…*Streetwise*	6.27	1.19
	Violent…Non-Violent	2.09	0.94
	Wealthy…*Poor*	5.73	0.65
EA + S	*Positive*…Negative	3.00	0.94
	Aimless…Focused	6.30	0.67
	Industrious…Laid-Back	2.40	0.84
	Informed…Ignorant	2.30	0.67
	Irresponsible…Responsible	6.00	0.67
	Unmotivated…*Ambitious*	6.60	0.70
	Lazy…*Hard-working*	6.60	0.70
	Organized…Unorganized	1.80	1.03
	Safe…Dangerous	1.80	0.79
	Sheltered…Street-wise	2.40	1.07
	Threatening…Non-threatening	6.10	0.74
	Violent…Non-violent	5.60	0.97

		M	SD
EA - S	Positive…*Negative*	4.91	1.81
	Boastful…Modest	1.64	0.92
	Independent…*Dependent*	5.64	1.96
	Industrious…Laid-back	5.91	0.94
	Insensitive…Sensitive	2.36	1.36
	Irresponsible…Responsible	1.91	0.83
	Unmotivated…Ambitious	1.82	1.33
	Lazy…Hard-working	2.0	1.67
	Materialistic…Non-	1.55	1.21
	Wealthy…Poor	2.45	2.0

Note: EA + CS= Positive and counter-stereotypic European American, EA - CS= Negative and counter-stereotypic European American, EA + S= Positive and stereotypic European American, EA - S= Negative and stereotypic European American.

Table 5

Mean Personality Attributes Scores for African-American Profiles

Profile	Personality Attributes	*M*	*SD*
AA + CS	*Positive*…Negative	2.83	1.53
	Aimless…Focused	6.17	1.11
	Athletic…*Non-athletic*	5.83	1.85
	Informed…Ignorant	2.42	1.44
	Irresponsible…Responsible	6.42	1.16
	Unmotivated…*Ambitious*	6.08	1.16
	Lazy…*Hard-working*	6.33	0.89
	Safe…Dangerous	2.08	1.08
	Sheltered…Streetwise	2.5	1.09
	Threatening…*Non-threatening*	5.67	1.23
	Violent…*Non-violent*	6.00	1.04
AA - CS	Positive…*Negative*	5.09	1.14
	Athletic…*Non-athletic*	5.55	1.21

	Boastful…Modest	2.18	1.25
	Exciting…Boring	5.45	1.37
	Flexible…Stubborn	5.73	1.27
	Independent…Dependent	6.09	1.58
	Industrious…Laid-back	6.00	1.10
	Informed…Ignorant	5.91	1.22
	Insensitive…Sensitive	2.27	1.79
	Irresponsible…Responsible	2.0	1.79
	Unmotivated…Ambitious	2.09	1.76
	Lazy…Hard-working	1.82	1.25
	Materialistic…Non-Materialistic	1.82	1.25
	Non-musical…Musical	2.00	1.10
	Wealthy…Poor	2.27	1.27
AA + S	*Positive*…Negative	2.40	1.07
	Competent…Incompetent	2.50	1.78
	Dorky…Cool	5.90	1.10
	Exciting…Boring	2.50	0.85
	Athletic…Non-Athletic	1.80	1.14
	Non-Musical…*Musical*	6.30	0.95
AA - S	Positive…*Negative*	6.00	1.15
	Aimless…Focused	1.90	1.10
	Boastful…Modest	2.40	1.17
	Dorky…Cool	2.10	0.99
	Flexible…Stubborn	5.80	0.92
	Insensitive…Sensitive	2.10	1.52
	Irresponsible…Responsible	1.70	1.16
	Unmotivated…Ambitious	2.00	1.25
	Lazy…Hard-working	1.90	0.88
	Organized…Unorganized	5.60	1.26
	Safe…*Dangerous*	5.80	0.63
	Sheltered…*Streetwise*	6.40	1.07
	Threatening…Non-threat	2.40	1.26
	Wealthy…*Poor*	5.60	0.70

Note: AA + CS= Positive and counter-stereotypic African American, AA - CS= Negative and counter-stereotypic African American, AA + S= Positive and stereotypic African American, AA - S= Negative and stereotypic African American.

APPENDIX E

PERSONALITY ATTIRBUTES SURVEY

1) If you were told someone was **<u>musical</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

2) If you were told someone was **<u>organized</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

3) If you were told someone was **<u>athletic</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

4) If you were told someone was **<u>sheltered</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

5) If you were told someone was **<u>successful</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

6) If you were told someone was **<u>streetwise</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

7) If you were told someone was **<u>educated</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

8) If you were told someone was **<u>violent</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

9) If you were told someone was **<u>cool</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

10) If you were told someone was **<u>expressive</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

11) If you were told someone was **<u>competitive</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

12) If you were told someone was **<u>laid-back</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

13) If you were told someone was **<u>organized</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

14) If you were told someone was **<u>industrious</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

15) If you were told someone was **<u>wealthy</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

16) If you were told someone was **<u>informed</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positively

17) If you were told someone was **<u>focused</u>** how positively or negatively would you view that person?

-3	-2	-1	1	2	3
Very Negatively	Somewhat Negatively	Slightly Negatively	Slightly Positively	Somewhat Positively	Very Positivel

APPENDIX F

EXEMPLAR PROFILES

Control
        You and your friends are on vacation in the Hawaii. While you are on vacation you spend much of your time laying out in the sun or going snorkeling and scuba diving in the ocean. During the evenings you all enjoy going out to the excellent restaurants on the island to eat, chat and just generally have a good time. Some of the highlights of your trip have been going to a luau, whale watching and hiking along the ridge of an extinct volcano. It is a very memorable trip and you would recommend that all of your friends visit Hawaii.

EA + S
        Brandon is a nineteen year old Caucasian American male who grew up in one of the nicer suburbs of Atlanta. One of his chief interests is current events. He spends much of his time reading the newspaper and watching the news so that he may be up to date. As such, he is considering a major in history or political science. The university to which he was accepted offered him a highly competitive academic scholarship, awarded only to those at the top of their graduating class. He is currently enrolled at his university and has earned a spot on the deans list both semesters. As a result, he is currently being considered for membership in the Society of Scholars honors organization.

EA + CS
        Brandon is a nineteen year old Caucasian American male who grew up in one of the rougher neighborhoods in inner-city Atlanta. One of his chief interests is music. He spends much of his time listening to and producing rap and hip-hop music. As such, he is considering majors in music or business management/production. The university to which he was accepted offered him a highly competitive basketball scholarship, awarded only to those at the tope of their game. He is currently enrolled at his university and has earned a spot on the deans list both semesters. As a result, he is currently being considered for membership in the Society of Scholars honor organization.

EA - S
        Brandon is a nineteen year old Caucasian American male who grew up in one of the nicer suburbs of Atlanta. One of his chief interests is current events. He spends much of his time reading the newspaper and watching the news so that he may be up to date. As such, he is considering a major in history or political science. The university to which he was accepted offered him a highly competitive academic scholarship, awarded only to those at the top of their graduating class. He is currently enrolled at his university, though he has been put on academic probation both semesters. He is currently under investigation for cheating by buying exams and papers off of others.

EA - CS
        Brandon is a nineteen year old Caucasian American male who grew up in one of the rougher neighborhoods in inner-city Atlanta. One of his chief interests is music. He spends much of his time listening to and producing rap and hip-hop music. As such, he is considering majors in music or business management/production. The university to

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which he was accepted offered him a highly competitive basketball scholarship, awarded only to those at the tope of their game. He is currently enrolled at his university, though he has been put on academic probation both semesters. He is currently under investigation for cheating by buying exams and papers off of others.

AA + S

Brandon is a nineteen year old African American male who grew up in one of the rougher neighborhoods in inner-city Atlanta. One of his chief interests is music. He spends much of his time listening to and producing rap and hip-hop music. As such, he is considering majors in music or business management/production. The university to which he was accepted offered him a highly competitive basketball scholarship, awarded only to those at the top of their game. He is currently enrolled at his university and has earned a spot on the deans list both semesters. As a result, he is currently being considered for membership in the Society of Scholars honor organization

AA + CS

Brandon is a nineteen year old African American male who grew up in one of the nicer suburbs of Atlanta. One of his chief interests is current events. He spends much of his time reading the newspaper and watching the news so that he may be up to date. As such, he is considering a major in history or political science. The university to which he was accepted offered him a highly competitive academic scholarship, awarded only to those at the top of their graduating class. He is currently enrolled at his university and has earned a spot on the deans list both semesters. As a result, he is currently being considered for membership in the Society of Scholars honors organization

AA - S

Brandon is a nineteen year old African American male who grew up in one of the rougher neighborhoods in inner-city Atlanta. One of his chief interests is music. He spends much of his time listening to and producing rap and hip-hop music. As such, he is considering majors in music or business management/production. The university to which he was accepted offered him a highly competitive basketball scholarship, awarded only to those at the top of their game. He is currently enrolled at his university, though he has been put on academic probation both semesters. He is currently under investigation for cheating by buying exams and papers off of others.

AA - CS

Brandon is a nineteen year old African American male who grew up in one of the nicer suburbs of Atlanta. One of his chief interests is current events. He spends much of his time reading the newspaper and watching the news so that he may be up to date. As such, he is considering a major in history or political science. The university to which he was accepted offered him a highly competitive academic scholarship, awarded only to those at the top of their graduating class. He is currently enrolled at his university, though he has been put on academic probation both semesters. He is currently under investigation for cheating by buying exams and papers off of others.

APPENDIX G

PROFILES SCALE

Using the scales provided, indicated on which side of the scale the individual described falls. When you have completed the survey, please place the questionnaire in your envelope. All responses are kept confidential and only identified by a random code number not connected with any identifying information.

1. dorky…..1…..2…..3…..4…..5…..6…..7…..cool

2. insensitive.....1…..2…..3…..4…..5…..6…..7…..sensitive

3. athletic.....1…..2…..3…..4…..5…..6…..7…..non-athletic

4. expressive.....1…..2…..3…..4…..5…..6…..7…..stuffy

5. sheltered.....1…..2…..3…..4…..5…..6…..7…..streetwise

6. non-musical.....1…..2…..3…..4…..5…..6…..7…..musical

7. organized.....1…..2…..3…..4…..5…..6…..7…..unorganized

8. competitive.....1…..2…..3…..4…..5…..6…..7…..uncompetitive

9. independent.....1…..2…..3…..4…..5…..6…..7…..dependent

10. unmotivated.....1…..2…..3…..4…..5…..6…..7…..ambitious

11. industrious.....1…..2…..3…..4…..5…..6…..7…..laid-back

12. irresponsible.....1…..2…..3…..4…..5…..6…..7…..responsible

13. wealthy.....1…..2…..3…..4…..5…..6…..7…..poor

14. informed…..1…..2…..3…..4…..5…..6…..7…..ignorant

15. complaining…..1…..2…..3…..4…..5…..6…..7…..content

16. violent…..1…..2…..3…..4…..5…..6…..7…..non-violent

17. faithful…..1…..2…..3…..4…..5…..6…..7…..promiscuous

18. aimless…..1…..2…..3…..4…..5…..6…..7…..focused

19. lazy…..1…..2…..3…..4…..5…..6…..7…..hard-working

20. safe…..1…..2…..3…..4…..5…..6…..7…..dangerous

21. threatening…..1…..2…..3…..4…..5…..6…..7…..non-threatening

22. boastful…..1…..2…..3…..4…..5…..6…..7…..modest

23. flexible…..1…..2…..3…..4…..5…..6…..7…..stubborn

24. materialistic…..1…..2…..3…..4…..5…..6…..7 …..not concerned with material things

25. exciting…..1…..2…..3…..4…..5…..6…..7…..boring

26. conventional…..1…..2…..3…..4…..5…..6…..7…..unconventional

27. positive…..1…..2…..3…..4…..5…..6…..7…..negative