BEHAVIORAL CORRELATES OF IMPLICIT

EVALUATION AND STEREOTYPING OF

NATIVE AMERICAN MASCOTS

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CHAPTER I

INTRODUCTION

The issue of Native American sports mascots has drawn considerable attention and controversy in recent years. Approximately 1,217 high schools and 88 colleges continue to utilize Native images, even though these images promote inauthentic portrayals of Native American people (e.g., King, Staurowsky, Baca, Davis, & Pewewardy, 2002; Pewewardy, 1999; Rodriguez, 1998). Although various educational institutions have discontinued the use of Native mascots (e.g., Stanford, Marquette, Dartmouth; Rodriguez, 1998), several institutions maintain that these images are positive representations intended to honor Native American people. Strong (2004) has stated that regardless of the perceived intent, the continuation of Native American mascots assigns Native Americans to an allegorical or symbolic form of cultural citizenship, which prevents Native Americans from enjoying full participatory citizenship in society.

One domain in which the use of Native mascots has been deemed particularly problematic is the educational environment. It has been argued that Native Americans attending schools with Native American mascots may find themselves in racially hostile environments, affecting students' self-esteem and achievement expectancy, as well as denying Native American students full participation in the educational process (Baca, 2004). Indeed, some parents and children find these mascots offensive and degrading,

which Baca sees as a violation of Title VI of the Civil Rights Act of 1964. Interestingly, Title VI prohibits discrimination on the basis of race in federally funded programs (including public schools) and also prohibits schools from creating or tolerating racially hostile educational settings (Trainor, 1995).

Despite insistence that the use of Native mascots honors Native Americans and these images should be viewed as positive symbols, for over thirty years numerous individuals and organizations have requested that Native American logos, nicknames, and mascots be discontinued (Eitzen & Zinn, 2001). Although this issue has received national attention as of late, it has been an important topic for Native American groups (e.g., AIM, Society of Indian Psychologists) for decades. Numerous non-Native organizations (e.g., United States Commission on Civil Rights, National Collegiate Athletic Association) have also united with Native groups in advocating for the retirement of these mascots. Specifically, the U.S. Commission on Civil Rights called for an end to the use of Native images and athletic team names by non-Native American institutions in 2001. Similarly, the National Collegiate Athletic Association (NCAA) released a statement prohibiting NCAA colleges and universities from using hostile or racist images at championship events in 2005. Importantly, the American Psychological Association (APA, 2005) issued a council resolution calling for the discontinuation of all Native American mascots by educational institutions and athletic teams.

A great deal of public attention has been drawn to the Native American mascot issue, however, there is an absence of data in the empirical literature. Despite numerous journal articles (e.g., Banks, 1993; Pewewardy, 1999; Rodriguez, 1998; Sigelman, 1998; Staurowsky, 1999; Wenner, 1993) and entire volumes (e.g., King & Springwood, 2001a;

King & Springwood, 2001b; Spindel, 2002) arguing that Native American mascots promote negative stereotypes of Native American people, most individuals have acquired knowledge about the mascot issue from mainstream media. Reports that are the most widely publicized support the continuation of Native mascots. One of the most recognized articles regarding the use of Native mascots was done by Sports Illustrated (Price, 2002). In that article, the Peter Harris Research Group conducted a survey that polled Native Americans' opinion on the mascot issue. Results indicated that 83% of Native Americans supported the use of Native American mascots. The interpretation of these data is problematic primarily because the researchers are unwilling to reveal details of their survey methodology, despite frequent questioning by investigators (King et al., 2002). Unfortunately, other polls investigating opinions concerning the mascot debate have provided opposite results and received less media attention (e.g., Indian Country Today, 2001).

The lack of empirical research on Native American mascots can be partially attributed to the absence of sufficient measurement methodology. Specifically, one of the main difficulties encountered when investigating racial or prejudicial attitudes is the tendency for respondents to under-report prejudicial attitudes on self-report measures. Dovidio (2001) proposed that socially conditioned attitudes (e.g., racial prejudice) operate as subtle or implicit forms of bias that are maintained at a non-conscious level, making these less accessible by self-report measures.

The problem with examining implicit attitudes has been alleviated somewhat by advancement in methodology, such as the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998). The IAT is a computerized task that investigates implicit or

automatic associations by measuring how closely (i.e., how quickly) certain stimuli are associated with evaluative attributes (e.g., positive or negative). In other words, the greater the learned association between two stimuli, the more automatic individuals can process or make decisions about related concepts (Greenwald et al., 1998; Karpinski & Hilton, 2001). For example, response latencies for "snakes-dangerous" word pairs (i.e., compatible judgment pairs) would be shorter than for "flowers-dangerous" pairs (i.e., incompatible judgment pairs) because of the greater strength of the conditioned (automatic) association between "snakes" and "dangerous", compared to the association between "flowers" and "dangerous". According to Dovidio (2001), prejudicial or racial attitudes operate in a similar fashion.

The IAT has been used successfully to demonstrate Caucasian individuals' implicit biases toward various racial groups. For example, Greenwald et al. (1998) used the IAT to examine pleasant (e.g., happy, peace) and unpleasant (e.g., rotten, ugly) evaluative attributes associated with Caucasian names (e.g., Brandon and Betsy) compared to African American names (e.g., Darnell and Latisha) in a sample of Caucasian college students. Response times were found to be significantly shorter for Black names paired with unpleasant attributes and White names paired with pleasant attributes (i.e., compatible judgment pairings) than when "Black – pleasant" and "White –unpleasant" combinations were presented (i.e., incompatible judgment pairings). Greenwald et al. suggested that the findings were evidence of an automatic negative bias toward African Americans. Numerous studies have used the IAT in demonstrating similar findings for other racial minority groups, including Hispanic Americans, Japanese

Americans, and Korean Americans (e.g., Greenwald et al., 1998; Ottaway, Hayden, & Oakes, 2001).

The empirical literature has examined implicit associations toward numerous minority groups (e.g., Greenwald et al., 1998; Ottaway, Hayden, & Oakes, 2001). However, implicit bias toward Native Americans has only recently been introduced into this area of research. For example, Nosek, Greenwald, and Banaji (2005) published a methodological review of eleven website experiments based on data from online studies of nearly 4500 respondents. IAT studies included in the review consisted of both pictures and names of famous Native Americans and White Americans as target concept stimuli. Results indicated a significant negative bias toward Native Americans.

Recently, Chaney, Burke, and Burkley (2009, Study 1) used the IAT in a sample of Caucasian college students to demonstrate a negative implicit bias toward Native Americans and Native American mascots. Words describing individuals of Native American descent (e.g., Navajo, Cherokee) and individuals of European descent (e.g., Irish, English) were randomly paired with both pleasant (e.g., miracle, love) and unpleasant (e.g., poison, tragedy) stimulus words. Response times were significantly shorter for the "Native American-unpleasant/European American-pleasant" pairings compared to "European American-unpleasant/Native American-pleasant" word pairings. Additionally, Chaney et al. (2009, Study 2) examined the utility of the IAT to detect implicit biases toward Native mascots (e.g., Redskins, Chiefs) compared to Caucasian mascots (e.g., Fighting Irish, Vikings). Mascot words were randomly paired with pleasant (e.g., miracle, love) and unpleasant (e.g., poison, tragedy) evaluative attributes. Response latencies were significantly shorter for the "Native American mascot-

unpleasant/Caucasian mascot-pleasant" pairings in relation to "Caucasian mascot-unpleasant/Native American-pleasant" word pairings, indicating a negative implicit bias towards Native American mascots. Thus, Chaney et al. demonstrated that implicit racial bias toward Native Americans possibly translates into implicit bias toward Native American mascots as well.

Moreover, the IAT has also been used to examine the relationship between implicit bias and inter-racial social interactions (Amodio & Devine, 2006; McConnell & Leibold, 2001, Rudman & Ashmore, 2007). Specifically, Amodio and Devine examined the nature of implicit stereotyping and implicit prejudice on behavior using a stereotype-based IAT and an evaluative IAT. Derived from Greenwald et al. (1998), the evaluative IAT consisted of Caucasian versus African American faces paired with generic positive/negative evaluative attributes (e.g., love, rotten). In contrast, the stereotype IAT was composed of Caucasian versus African American faces paired with two categories of ostensibly positive mental and physical traits (e.g., smart, athletic). Results indicated that participants' stereotype IAT performance was positively correlated with instrumental behaviors such as initial judgment and impression formation of an African American student. Evaluative IAT performance, on the other hand, was positively correlated with consummatory behaviors such as seating distance and interpersonal preference in regard to an African American partner. These data indicate that the IAT predicts overt social behaviors and judgments, and that stereotyping and prejudicial attitudes operate as independent constructs that elicit different kinds of discriminatory behavioral responses.

Additionally, Rudman and Ashmore (2007) conducted two studies that examined the relationship between implicit bias and harmful intergroup behavior (e.g., verbal slurs,

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exclusion, physical harm, economic discrimination). Both evaluative and evaluative stereotype IAT's were administered to Caucasian samples in order to predict harmful behaviors toward outer-group members (e.g., African Americans, Asians, and Jewish), as well as explicit self-report measures inquiring about overt discriminatory behaviors (e.g., racial slurs, violence). Results indicated implicit bias toward African Americans with both the evaluative and evaluative stereotype IAT's, as well as demonstrating a relationship between the IAT and harmful intergroup behaviors. Specifically, the evaluative IAT covaried with verbal discrimination (e.g., ethnic slurs, jokes) whereas the evaluative stereotype IAT was related to each behavioral domain (verbal, avoidance/exclusion, physical/hostile). Similarly in Study 2, both evaluative and stereotype evaluative IAT's were administered to a Caucasian sample to examine the relationship between implicit bias and economic discrimination toward minority student organizations (e.g., Jewish, African American). Results indicated that both the evaluative and evaluative stereotype IAT's predicted economic discrimination. Thus, Rudman and Ashmore (2007) demonstrated that both evaluative and evaluative stereotype IAT's have predictive value when examining harmful discriminatory behaviors, as well as suggesting that evaluative stereotype IAT's may be a more sensitive measure of implicit bias because it combines beliefs with evaluative properties.

The purpose of the present studies was to expand on the IAT methodology of Chaney et al. (2009) and to examine the relationship between performance on a mascot IAT and race-biased social behaviors (e.g., forming judgments, social distance) toward Native Americans. Specifically, Study 1 used an evaluative stereotype IAT (see Rudman & Ashmore, 2007) comprised of positive and negative stereotypes (e.g., smart, lazy)

paired with words describing people of Native American descent (e.g., Cherokee, Sioux) and individuals of European descent (e.g., Irish, German). Study 2 involved two phases: 1) Participants completed an evaluative stereotype IAT that paired Native American mascots (e.g., Redskins, Braves) and Caucasian mascots (e.g., Celtics, Vikings) with positive and negative stereotypes (e.g., responsible, worthless), and 2) similar to the methodology of Amodio and Devine (2006, Study 3), the second phase of Study 2 examined the association of participants' mascot IAT performance with both behavioral responses (e.g., seating distance) and stereotype-consistent performance expectations of a Native American student.

The following chapter provides an extensive review of the relevant literature on the IAT, with specific emphasis on empirical demonstrations of the relationship between evaluative and stereotype IAT performance, interracial interactions, and social judgments. Additionally, results of two IAT studies are presented. Study 1 examined potential negative evaluative stereotypes associated with Native Americans. Study 2 examined implicit biases toward Native American mascots using an evaluative stereotype IAT and examined race-biased behavioral outcomes (e.g., social distance, performance expectations) associated with negative mascot biases. Consistent with Chaney et al. (2009) it was anticipated that results of the present studies would demonstrate implicit negative associations on the part of Caucasian college students toward both Native Americans and Native American mascots. Further, consistent with Amodio and Devine (2006, Study 3), it was anticipated that negative associations on the Native mascot IAT would be significantly associated with race-biased behaviors (e.g., social distance, stereotype expectations) toward Native Americans.

CHAPTER II

REVIEW OF LITERATURE

The Implicit Association Test (IAT) has been used to examine various constructs, including voting behavior (e.g., Friese, Bluemke, & Wanke, 2007), religion (e.g., Rowatt & Franklin, 2004; Rowatt, Franklin, & Cotton, 2005), self-esteem and self-concept (e.g., Greenwald & Farnham, 2000), attitudes towards drug use (e.g., Wiers, Houben, & de Kraker, 2007) and smoking (e.g., Huijding, de Jong, Wiers, & Verkooijen, 2005), as well as severity of psychopathology (e.g., Houwer, 2002) and anxiety (e.g., Egloff & Schukle, 2002). Importantly, the IAT is becoming known as a widely used instrument for measuring implicit racial bias (Devine, 2001). For the purpose of the present paper, the literature review will focus on the relevant empirical literature regarding the application of the IAT to racial attitudes, as well as literature exploring the relationship between the IAT and interracial social behavior.

Description of the IAT Procedure

The IAT examines the strength of association between target-concepts (e.g., flowers versus insects) and evaluative attributes (e.g., pleasant versus unpleasant words). Participants are required to sort target-concept stimulus words (e.g., roses, wasps) into their corresponding categories located on either the upper right-hand (e.g., flowers) or left-hand (e.g., insects) side of the computer screen. Sorting of words is accomplished by

assigning one category (e.g., flowers) to a response by the left hand (using the "D" key) and the other (e.g., insects) by the right hand (using the "K" key). Participants are given multiple practice trials assigning target-concepts (e.g., tulips, bees) to their appropriate categories (e.g., flowers, insects).

In the second set of trials, evaluative attributes (e.g., pleasant versus unpleasant words) are sorted by using the same computer keys (e.g., "K" key for pleasant; "D" key for unpleasant). Participants are then required to sort the stimulus words into their corresponding categories. For example, if the participant is presented with a negative stimulus word (e.g., rotten) he/she must assign it to the correct category (e.g., unpleasant). This is followed by multiple practice trials where the participant categorizes evaluative attributes (e.g., love, poison).

In the third block of trials, the target-concept and evaluative attribute categories are combined. Participants are either presented with compatible judgment pairings (e.g., "flowers or pleasant" versus "insects or unpleasant") or incompatible pairings (e.g., "insects or pleasant" versus "flowers or unpleasant"). The combinations are presented alternately for each participant. In other words, half the participants are presented the compatible category first, and half are presented the incompatible category first. Stimulus words for the target (e.g., roses) and attribute (e.g., love) categories are randomly presented to participants, and they are required to sort them into the correct combined category. Subsequently, in the fourth block of trials, target-concept categories (e.g., flowers, insects) are reversed on the screen and shown without evaluative attributes (e.g., pleasant, unpleasant). For example, if the "flowers" category initially appeared on the right, it now appears on the left, and the "insects" category appears on the right.

Participants are given multiple practice trials to familiarize themselves with the new order.

Finally, in the fifth block, newly combined categories are presented, reflecting the reversed response assignments of either the incompatible pairings (e.g., "insects or pleasant" versus "flowers or unpleasant") or compatible pairings (e.g., "insects or unpleasant" versus "flowers or pleasant"). It is the measurable difference between compatible trial blocks and incompatible trial blocks that provides the measure of implicit bias toward target-concepts (flowers versus insects). Throughout the procedure, after an incorrect response, a red "X" appears in the center of the computer screen. Additionally, participants are provided feedback regarding their performance after every trial-block, including percentage correct and mean response latency in milliseconds.

Empirical Demonstrations of the IAT in Detecting Implicit Attitudes

Greenwald et al. (1998) conducted the first empirical demonstrations of the IAT in a series of three experiments. In Experiment 1, Greenwald et al. examined the IAT's utility in detecting implicit attitudes toward familiar items that are assumed to have common innate evaluative associations (e.g., positive versus negative) among individuals. Two of the target-concepts were considered inherently pleasant (flowers and musical instruments) and two unpleasant (insects and weapons). Participants were shown two target-concept combinations: (a) types of flowers (e.g., tulip, rose) compared to types of insects (e.g., bee, wasp) and (b) types of musical instruments (e.g., flute, violin) versus types of weapons (e.g., knife, gun). These target-concepts were combined with pleasant stimulus word attributes (e.g., happy, peace) and unpleasant stimulus attributes (e.g., rotten, ugly).

In a sample of 32 (13 male and 19 female) college students, participants completed two IAT procedures, one using flowers versus insects as target-concepts, and the second using musical instruments versus weapons. Both IAT tasks incorporated pleasant versus unpleasant stimulus words as evaluative attributes. As anticipated, results indicated more positive associations toward flowers than insects and toward musical instruments than weapons. Specifically, participants performed significantly faster when sorting stimulus items into compatible combinations (flower + pleasant or instrument + pleasant) than incompatible combinations (insect + pleasant or weapon + pleasant). Thus, participants demonstrated a stronger association for flower + pleasant and instrument + pleasant word pairings compared to insects or weapons combined with positive evaluative attributes.

Experiment 2 (Greenwald et al., 1998) extended the methodology of the IAT to racially based implicit attitudes. Specifically, attitudes held by Japanese Americans and Korean Americans towards each other were examined using the IAT. It was anticipated that individuals in their respective ethnic group would hold negative attitudes toward the out-group due to the history of Japanese-Korean conflict, as well as demonstrate more positive associations towards their respective in-group.

The sample included 17 self-identified Korean American and 15 Japanese American college students enrolled in introductory psychology courses. The IAT stimulus items consisted of the same evaluative attribute categories as Experiment 1 (e.g., pleasant versus unpleasant words). Additionally, 25 Korean (e.g., Youn) and 25 Japanese (e.g., Kawa) surnames served as target-concepts. Due to Japanese names typically being longer than Korean names, a set of 25 truncated Japanese names was generated from the

25 selected Japanese surnames. The truncation of Japanese names ensured that for each Korean name, there was a condensed Japanese name of similar length. After being exposed to numerous versions of the full-length names, the truncated Japanese names were introduced to participants.

Participants completed two IAT procedures. For the first IAT task, participants categorized Korean names versus full-length Japanese names. In the second task, target-concepts consisted of Korean names versus truncated Japanese names. Additionally, Experiment 2 addressed the order effect found in Experiment 1 by assigning opposite response keys for the initial target-concept discrimination step of the procedure. For instance, participants who were initially exposed to the Japanese + pleasant word pairings in the first IAT were presented first with Korean + pleasant word pairings in the second IAT task.

As anticipated, Korean participants demonstrated stronger associations for stimulus items in the compatible judgment category (Korean names + pleasant words/Japanese names + unpleasant words) compared to the incompatible category (Korean names + unpleasant words/Japanese names + pleasant words). Specifically, Korean participants' response times were significantly faster for the compatible pairings than incompatible pairings. Results revealed similar findings for Japanese participants. Japanese participants responded significantly faster to compatible categories (Japanese names + pleasant words/Korean names + unpleasant words) than to incompatible categories (Japanese names + unpleasant words/ Korean names + pleasant words), revealing a negative bias toward Korean Americans relative to their in-group.

Additionally, results demonstrated that using truncated version of Japanese names in place of full-length Japanese names had minimal effect on the results.

Experiment 3 (Greenwald et al., 1998) utilized the IAT to examine Caucasians' evaluative attitudes of White versus African American names. The sample consisted of 26 Caucasian college students enrolled in introductory psychology courses. Pleasant and unpleasant words, similar to those used in previous experiments (e.g., Experiments 1 and 2), were chosen as evaluative attributes. Additionally, the target-concepts of stereotypical Caucasian (e.g., Brandon, Betsy) and African American names (e.g, Darnell, Latisha) were selected from a pre-tested list given to college students; target-concept names were those categorized by students as being typically Caucasian or African American. Experiment 3 followed the same methodology as Experiment 2, replacing Japanese and Korean names with White and Black names.

Results revealed that response latency times were significantly faster for compatible combinations (White + pleasant, Black + unpleasant) than incompatible combinations (White + unpleasant, Black + pleasant), indicating a more positive association for Caucasian names compared to African American names. Generally, results from the three experiments reveal the IAT's usefulness in measuring attitudinal evaluations.

Ottaway, Hayden, and Oakes (2001) extended the applicability of the IAT to include other minority groups in a similar study comparing evaluative associations for Hispanic and Caucasian names. Participants were 33 Caucasian female undergraduates. Using similar methodology as Greenwald et al. (1998; Study 3), target-concepts consisted of stereotypical Hispanic names (e.g., Josefina, Pedro) and Caucasian names (e.g.,

Dorothy, Barry) selected by four criteria: First, names had to be relatively common among Hispanic and Caucasian groups. Second, an average familiarity rating on a 5 point scale (approximately 3 or "somewhat familiar") previously administered to Caucasian undergraduate students was required. Third, names representing each racial category were to have similar average frequencies in the U.S. Census database (i.e., name frequency was equal across racial group). Ultimately, from the Caucasian names that passed through the first three criteria, names that overlapped with Caucasian names from Greenwald et al. (1998, Experiment 3) were chosen as stimulus words, resulting in a 30% overlap. Pleasant and unpleasant words were chosen by a similar method, resulting in an 80% overlap with Greenwald et al.'s pleasant and unpleasant words, respectively.

As expected, response latency times were significantly shorter for compatible pairings (Caucasian + pleasant/Hispanic + unpleasant) than for incompatible pairings (Caucasian + unpleasant/Hispanic + pleasant). In other words, results indicated a negative implicit bias on the part of Caucasian students when assigning evaluative attributes to Hispanic names versus Caucasian names.

There were several differences in the methodology conducted by Ottaway et al. (2001) compared to Greenwald et al. (1998). On the combined category discrimination tasks (target-concept + attribute), target-concept stimulus words and evaluative attribute stimulus words appeared randomly rather than alternating order on every-other trial. Participants also received performance feedback and average response latency feedback only upon completion of the task, rather than at the end of each block. Regardless of these methodological differences, results were similar to the findings of Greenwald et al. in regard to the empirical demonstration of negative implicit bias toward Hispanic names.

Chaney et al. (2009) recently examined the IAT's ability to detect implicit racial bias of Caucasians toward Native Americans and Native American mascots in a series of three experiments. In Experiment 1, participants were 55 Caucasian college students enrolled in introductory psychology courses in the southwestern United States. Utilizing methodology similar to Greenwald et al. (1998), the IAT was administered individually to participants in a campus laboratory. Target-concept stimulus items were categorized as describing people of Native American descent (e.g., Apache, Choctaw, Cherokee) versus people of European American descent (e.g., French, German, Scottish). European American was used as the target-concept category label instead of Caucasian to provide for consistency in category names. These categories were used in combination with pleasant (e.g., love, miracle, beauty) and unpleasant (e.g., rotten, poison, hatred) evaluative attributes.

Consistent with previous studies (e.g., Greenwald et al., 1998; Ottaway, Hayden, & Oakes, 2001), results indicated a negative implicit bias on the part of Caucasian college students toward Native Americans. Response latencies were significantly shorter for compatible associations (European American + pleasant/Native American + unpleasant) compared to incompatible associations (European American + unpleasant/Native American + pleasant), suggesting a negative implicit racial bias toward Native Americans.

In Experiment 2, Chaney et al. (2009) utilized the IAT to examine implicit attitudes toward Native American mascots in relation to Caucasian mascots. Participants were 79 Caucasian college students enrolled in introductory psychology courses in the southwestern United States. Similar to the methodology in Experiment 1, the IAT was

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individually administered in a research laboratory on campus. Target-concept stimulus

items were labeled as Native mascots (e.g., Redskins, Braves, Chiefs) versus Caucasian

mascots (e.g., Celtics, Pirates, Vikings). These categories were used in combination with

pleasant (e.g., love, miracle, beauty) and unpleasant (e.g., rotten, poison, hatred)

evaluative attribute stimuli. Consistent with Experiment 1, results indicated an implicit

racial bias by Caucasian college students toward Native American mascots. Response

latencies were significantly shorter for compatible judgment combinations (Caucasian

mascot + pleasant/Native mascot + unpleasant) compared to incompatible combinations

(Caucasian mascot + unpleasant/Native mascot + pleasant).

Even though results of Chaney et al. (2009; Studies 1 & 2) suggested that the

observed negative evaluation of Native mascots was a function of implicit racial bias,

these authors explored a potential alternative explanation for their findings. Specifically,

King and colleagues (2002) have pointed out that non-Native people are also among

those who oppose the use of Native American mascots. Thus, it is possible that the IAT

results in Chaney et al. (Study 2) reflected a negative emotional reaction from Caucasian

participants who believed the use of Native American mascots to be an offensive

practice. In other words, the results may not have been due to negative associations

toward Native mascots based on dislike or antipathy, but to the offensive nature of Native

mascots in general. IAT performance based on this type of attitude (i.e., social aversion

to the use of Native mascots) would be indistinguishable from IAT responses resulting

from negative associations with Native American mascots based on racial bias.

Chaney et al. (2009; Study 3) addressed this in a follow up study. Participants were

41 Caucasian college students enrolled in introductory psychology courses at the same

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university. In addition to the IAT administered in Experiment 2, participants also

completed a self-report measure that included a series of questions addressing general

perceptions about various social issues. Embedded within the questionnaire was a

relevant item that asked participants to rate the extent to which they found the use of

Native American mascots offensive.

Results indicated that only five out of 41 participants (12%) agreed that the use of

Native American mascots was offensive. For the remaining 36 participants, response

latencies for compatible word pairings (Native mascot + unpleasant/Caucasian mascot +

pleasant) were significantly shorter than incompatible word pairings (Native mascot +

pleasant/Caucasian mascot + unpleasant), demonstrating a negative implicit bias toward

Native American mascots. Similar analyses conducted on all 41 participants revealed

that regardless of whether offended participants were included or excluded, nearly

identical results were observed. In other words, for all 41 participants, response latencies

for compatible combinations were also significantly shorter than incompatible

combinations. Moreover, correlational results indicated a non-significant relation

between responses on the offensive item and IAT performance. Thus, despite explicit

positive construal of Native mascots as an acceptable social practice, a negative implicit

bias toward Native American mascots was observed.

Empirical Demonstrations of the IAT in Predicting Behavioral Outcomes

The IAT has also been used to examine the relationship between implicit bias and

inter-racial social interactions. Specifically, McConnell and Leibold (2001) investigated

the relationship of IAT performance with inter-racial behavioral responses and explicit

measures of prejudicial attitudes. Participants met with a Caucasian experimenter to

complete measures of racial prejudice and a race-based IAT and to engage in an unexpected social interaction with either an African American or Caucasian experimenter. Social interactions were videotaped and later rated by trained judges. In addition, the Caucasian and African American observers independently rated the interaction over the duration of the experiment to assess their impressions of participants' behavioral responses toward African American and Caucasian experimenters.   It was anticipated that participants with stronger negative implicit attitudes toward African Americans on the IAT would also demonstrate a more negative interaction with the African American experimenter.

Participants were 42 Caucasian undergraduates enrolled in introductory psychology courses. They completed semantic differential scales for both Caucasians and African Americans, as well as a feeling thermometer for Caucasians and African Americans. Participants then completed an IAT using African American names (e.g., Jamal, Yolanda), Caucasian names (e.g., Fred, Mary), desirable words (e.g., wonderful, awesome), and undesirable words (e.g., offensive, disgusting). Social interactions with Caucasian and African American experimenters were independently coded by trained judges according to the following criteria: smiles, laughter at experimenter's jokes, eye contact time, comfort level, body lean toward experimenter, openness of participant's arms, fidgety body movements, facial expressions, speech errors and hesitations, and various extemporaneous social comments made by the participant. Additionally, African American and Caucasian experimenters provided ratings regarding their own interactions with a 5-item inventory following similar criteria as the judges (e.g., eye contact, abruptness or curtness, friendliness, comfort level of both participant and experimenter).

As hypothesized, results revealed that participants who demonstrated stronger negative implicit evaluations of African Americans on the IAT also demonstrated more negative social interactions with an African American experimenter and reported more negative prejudicial attitudes toward African Americans on explicit measures. Importantly, significant implicit racial bias was demonstrated on the IAT, and IAT performance was related to measurable biases in inter-racial social interactions.

Amodio and Devine (2006) conducted a series of three experiments that examined the applicability of the IAT in examining implicit evaluative and stereotype associations, as well as the capability of the IAT in predicting instrumental (e.g., judgment formation) and consummatory (e.g., social distance) behaviors. Two separate IAT's were designed to assess either implicit evaluative bias or implicit stereotyping. The evaluative IAT was comprised of pictures of ten White and ten Black faces as the target-concept stimulus items. Similar to the methodology of Greenwald et al. (1998), evaluative attributes consisted of pleasant and unpleasant words (e.g., lucky, evil). Compatible pairings consisted of 'White or Pleasant/Black or Unpleasant' categories, while incompatible pairings consisted of 'White or Unpleasant/Black or Pleasant' categories.

The stereotyping IAT consisted of the same 20 pictures of White and Black faces for target-concept stimuli as in the evaluative IAT, as well as two categories that characterized the dimensions of intelligence (e.g., brainy, educated) and athleticism (e.g., boxing, run), labeled as 'mental' or 'physical'. Therefore, the compatible judgment combination consisted of 'White or Mental/Black or Physical' category labels, and the incompatible judgment combination consisted of 'White or Physical/Black or Mental' labels.

In Experiment 1, 151 Caucasian college students (82 women, 69 men) enrolled in introductory psychology courses participated for extra credit. Both the evaluative and stereotype IAT were administered, and the IAT order was counterbalanced across participants. As found in previous studies (e.g., Greenwald et al., 1998; Study 3; McConnell & Leibold, 2001), results indicated a negative implicit toward Black stimuli on the evaluative IAT. Results also revealed a significant pattern of implicit trait bias on the stereotyping IAT; response latencies were significantly shorter for compatible judgment pairings (White + mental/ Black + physical) relative to incompatible judgment pairings (White + physical/Black + mental). Importantly, there was no relation between the evaluative and stereotype IAT's, indicating that stereotyping and implicit evaluation are independent constructs.

In Experiment 2, Amodio and Devine (2006) examined the degree to which performance on stereotype and evaluative IAT related to both instrumental and consummatory behaviors toward an African American student. Instrumental behaviors were measured by assessing participants' stereotypes while forming impressions of an African American student based on the student's writing sample. To assess consummatory behaviors (e.g., avoidance responses), participants' reported their preference for the writer as a potential friend. Affective ratings of various racial groups were also collected by using a feeling thermometer.

The sample consisted of 36 Caucasian introductory psychology college students (15 men, 21 women) participating for extra credit. The study was divided into two parts. First, participants were to form impressions of others on the basis of a short writing sample. Folders were shown that contained different writing samples, and participants

were asked to randomly choose one; however, all folders contained the same essay. Once participants had selected a folder, he/she they read a demographic sheet indicating the writer was an African American male.

Participants read an essay, which contained grammatical and spelling errors, and provided ratings of the essay (e.g., organization, grammar) and the writer. Ratings for the writer contained items regarding stereotypes associated with African American stereotypes (e.g., lazy, dishonest, unintelligent, untrustworthy) and seemingly neutral stereotypes (e.g., modest, assertive, thoughtful), and participants were to rate their impressions of the student on a 1 (*not at all*) to 10 (*very* much) Likert scale. Additionally, similar ratings were made for five items that were based on affective responses that questioned befriending and socializing with the student (e.g., "The writer and I have a lot of things in common") on a Likert scale ranging from 1 (*strongly disagree*) to 10 (*strongly agree*). In the second part of the experiment, participants completed the evaluative and stereotyping IAT's used in Study 1, presented in counterbalanced order.

Similar to Experiment 1, results indicated an implicit negative evaluation toward Black faces relative to White faces on the IAT, as well as a significant implicit bias on the stereotyping IAT. Evaluative and stereotyping IAT performances were again unrelated. However, whereas evaluative IAT scores were unrelated to stereotypic ratings of the African American writer, greater implicit bias on the stereotype IAT predicted more stereotypic ratings of the writer. In contrast, more biased evaluative IAT scores were associated with less desire to befriend the African American writer. Thus, as hypothesized, biased stereotype IAT performance was related to instrumental behaviors

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(e.g., stereotype formation), whereas biased evaluative IAT performance was associated with consummatory behaviors (e.g., affective responses, negative feelings).

For Experiment 3, Amodio and Devine (2006) investigated observable responses toward an African American student in an ostensibly realistic social situation. The experiment was conducted in two separate sessions that consisted of: 1) participants completing both the evaluative and stereotype IAT in counterbalanced order; and 2) at a later date, participants were led to believe they would be interacting with an African American student on various tasks involving academic and nonacademic knowledge. In the first session, participants were 43 introductory psychology students, 21 of whom successfully returned for the second session (13 women, 8 men).

The second session involved individual participants returning to the laboratory to complete various tasks with a partner. After rating their own abilities in various domains (i.e., mathematics, verbal skills, knowledge of sports and popular cultural trivia), participants were instructed to choose which tasks they would complete and which their partner would complete (i.e., mathematics, verbal ability, sports trivia, and popular cultural trivia). Then, participants rated how well they thought they would perform on each task on a scale ranging from 1 (*very poorly*) to 9 (*very well*); similar ratings were provided on how well they thought the partner would perform on each task. Self and partner ratings of expected enjoyment on each task were also reported on a scale ranging from 1 (*not at all*) to 9 (*very much*). After the ratings were complete, the participant was led to believe that they were meeting with their partner. Participants were led into the hallway where eight identical chairs were equally spaced. A coat and a backpack

ostensibly belonging to the partner were placed on the chair closest to the experiment room doorway. The experimenter recorded their seating position.

Results revealed significant negative evaluations of Black faces on the evaluative IAT, as well as significant levels of implicit bias on the stereotype IAT. Similar to Experiments 1 and 2, evaluative IAT and stereotype IAT performances were unrelated. Moreover, higher stereotyping IAT scores were significantly correlated with stereotype-consistent expectations of the African American's performance (e.g., performing poorly on tasks of academic knowledge), whereas evaluative IAT bias was unrelated to performance expectations. Similarly, stereotype IAT bias (but not evaluative IAT bias) was related to ratings of expected partner enjoyment on more stereotype-consistent tasks (e.g., sports, popular culture). In contrast, evaluative IAT performance was associated with seating distance (consummatory behavior) from the African American partner, whereas stereotype IAT performance was not. Taken together, findings from Experiment 3 support the notion that negative implicit evaluation and implicit stereotyping are independent constructs that predict qualitatively different race-biased behaviors (e.g., consummatory versus instrumental).

Rudman and Ashmore (2007) conducted two studies that explored the relationship between both evaluative and evaluative stereotype IAT's with harmful intergroup behaviors (e.g., verbal slurs, avoidance/exclusion, hostile threats, and economic discrimination). Participants were 64 (21 male, 43 female; 52 Caucasian, 6 Asian American, 6 Latino) college students enrolled in introductory psychology courses. Both an evaluative IAT and evaluative stereotype IAT were administered in counterbalanced order.   The evaluative IAT consisted of Caucasian male names (e.g., Peter, Brad) and

African American male names (e.g., Lamar, Malik) as target-concept stimuli. Evaluative attributes consisted of generic pleasant and unpleasant words (e.g., smile, luck). Similarly, the evaluative stereotype IAT consisted of the same target-concept stimuli (e.g., Caucasian and African American names) paired with positive and negative stereotype attributes (e.g., lazy, ambitious).

Participants were then given a questionnaire that measured explicit discriminatory behaviors. Specifically, participants were asked how often in their life had they engaged in specific actions on a scale ranging from 1 (*never*) to 7 (*very often*). Three indices were used; verbal, defensive, and offensive. The verbal index included questions pertaining to racially offensive jokes or comments, either in the presence of the target or without them present. The defensive index included questioning about avoiding or purposefully excluding others from organizations or social activities based on ethnic membership. The offensive index consisted of questions that asked about nonverbal hostility (e.g., giving the "finger) and physical harm toward a target or their property due to their race. For each item, participants were first asked how often they had been a target due to their ethnicity in order to encourage honest reporting of discriminatory behaviors (e.g., justification of their own behavior).

Results revealed significant negative implicit evaluations of African American names compared to Caucasian names on the evaluative IAT, as well as significant levels of implicit bias on the evaluative stereotype IAT. Additionally, the evaluative IAT was positive correlated with verbal discrimination (e.g., offensive jokes), while the evaluative stereotype IAT was related to all three behavioral indices (verbal, defensive, offensive). In other words, the more implicit racial bias demonstrated on the evaluative IAT, the

more verbal discrimination was endorsed. Similarly, the more implicit bias demonstrated on the evaluative stereotype IAT, the more verbal, defensive, and offensive behaviors were endorsed. Therefore, although both IAT's predicted discriminatory behaviors, the evaluative stereotype IAT was predictive of more variations of discrimination than the evaluative IAT.

For Experiment 2, Rudman and Ashmore (2007) expanded the methodology from Experiment 1 to investigate IAT performance in relation to economic discrimination against African Americans, Asians, and Jews. Data were collected in three separate phases for each group. Each phase used an evaluative stereotype IAT and a questionnaire regarding budget cuts for minority student organizations. Only the African American and Asian phases included an evaluative IAT as well; the Jewish phase did not use an evaluative IAT.

In the first phase of data collection, 89 participants (37 men, 52 women; 64 Christians, 25 Jews) were given an evaluative stereotype IAT consisting of Jewish surnames (e.g., Katz, Shapiro) and Christian surnames (e.g., Miller, Taylor) paired with positive Christian stereotype (e.g., generous, friendly) and negative Jewish stereotype (e.g., controlling, dominating) attributes. For the Asian phase, both an evaluative stereotype IAT and evaluative IAT were administered to 89 participants (38 men, 51 women; 59 Caucasians, 30 Asians) in counterbalanced order. Both IAT's used Asian (e.g., Chang, Kwan) and Caucasian (e.g., Miller, Taylor) surnames as target-concept stimuli. The evaluative IAT's attributes (pleasant/unpleasant words) were identical to Experiment 1's. The evaluative stereotype IAT used negative Asian (e.g., reserved, stiff) and positive Caucasian (e.g., warm, outgoing) stereotype attributes. Likewise, during the

African American phase of the experiment, the same two IAT's were used from Experiment 1 and were administered to 126 participants (34 men, 92 women; 89 Caucasians, 37 African Americans) in counterbalanced order.

Before completing the IAT's from the specific phase (e.g., Jewish/Christian, Asian/Caucasian, or African American/Caucasian), participants were asked to complete a budget recommendation survey. This measure was presented as a survey conducted on behalf of the college's Psychology Department and as separate from the main study. Eight student organizations were listed, including the target groups of the IAT stimuli (Chabad Jewish Student Organization, Japanese Cultural Association, and Blacks United to Save Themselves) and five filler items (e.g., marching band, drama club). Participants were asked to recommend which organizations should have their funds decreased and by how much money.

Results indicated that all IAT's given (evaluative and evaluative stereotype) for each phase (Jewish, Asian, and African American) demonstrated implicit bias toward the target minority group. Additionally, majority groups (Christians and Caucasians) demonstrated greater economic discrimination compared to minority groups (Jewish, Asians, African Americans). In regards to the relationship between evaluative stereotype IAT performance and economic discrimination, the evaluative stereotype IAT was related to the budget measure in each phase. In other words, participants who demonstrated high levels of implicit bias were also likely to recommend budget cuts for that target minority group organization. Evaluative IAT performance with Asian and African American target stimuli was also reliably linked to recommended budget cuts for that particular minority group organization (Jewish phase did not have evaluative IAT). Therefore,

performance on both evaluative stereotype and evaluative IAT's were related to economic discrimination.

Summary

The preceding review demonstrates the utility of the Implicit Association Test (IAT) for investigating implicit racial attitudes across a variety of target populations (e.g., Chaney et al., 2009; Greenwald et al., 1998; Ottoway et al., 2001), and the social validity of these biases in predicting intergroup race-biased behaviors (e.g., Amodio & Devine, 2006; McConnell & Leibold, 2001; Rudman & Ashmore, 2007). Because IAT performance is directly related to measurable biases in social interactions, negative implicit bias revealed on the IAT is considered a valid indicator of unfavorable attitudes toward a target group. Additionally, although the IAT has been used to demonstrate implicit biases toward both Native Americans and Native American mascots (Chaney et al., 2009), no empirical data exist documenting the relationship between implicit attitudes toward Native mascots and race-biased social behaviors (e.g., consummatory, instrumental) toward Native American people. In the absence of such empirical data, it is not known if negative biases toward Native mascots translate into socially meaningful consequences. Therefore, the principle objective of the following studies is to examine the relationship between negative implicit bias toward Native mascots and the possible impact of these images on Native people.

CHAPTER III

THE PRESENT STUDIES

The present studies were designed with two primary goals in mind: 1) to expand on the IAT methodology of Chaney et al. (2009; Studies 1, 2, and 3) to examine people of Native American descent versus people of European American descent using a evaluative stereotype IAT; 2) to examine negative implicit stereotype biases toward Native American mascots using a similar evaluative stereotype IAT; and 3) to examine the association between evaluative stereotype biases on the mascot IAT and both instrumental (e.g., stereotype expectations) and consummatory (e.g., social distance) behaviors exhibited toward a Native American individual. Thus, whereas Chaney et al. used generic positive and negative words as evaluative attributes, the present studies used positive and negative stereotypical items (e.g., lazy, smart).

In IAT Study 1, words describing people of Native American descent versus words describing people of European American descent were randomly paired with positive or negative descriptors (e.g., dirty, healthy). Study 2 was designed to expand on existing mascot IAT studies (e.g., Chaney et al. 2009, Studies 2 and 3) and to examine the association of implicit bias toward Native mascots on the IAT with negative behavioral responses and stereotypical expectations toward a Native American student

A number of outcomes were anticipated: 1) in Study 1, Caucasian college students would demonstrate an implicit negative bias toward people of Native American descent relative to people of European American descent on the IAT; 2) in Study 2, an implicit negative bias toward Native American mascots would be observed on the IAT; and 3) the Native American mascot IAT effect demonstrated in Study 2 would predict negative behavioral responses and stereotype-consistent performance expectations of a Native American student.

Study 1

Method

Participants and Procedure

Participants were 43 (13 male, 30 female) self-identified Caucasian students recruited from undergraduate psychology courses at Oklahoma State University for a study involving a computerized word association task. This sample size exceeded the required number of participants (n = 39) needed in order to achieve adequate statistical power of .80 and to reject the null hypothesis with two-tailed α = .05 (Greenwald, Nosek, & Banaji, 2003). Class credit was given for participation in this study. Participants ranged in age from 18 to 27 (M = 19.65, SD = 1.82). The majority of participants had a parent with a college degree (46.5%). Additionally, 16.3% of participants had a parent with a post-graduate degree, 25.6% had some college, and 20.9% completed high school.

This study took place in a research laboratory located at the university. All information was kept confidential by assigning the participant a number. Participants took part in individual 20-minute sessions led by a graduate student. After reading and signing consent forms, participants completed a demographic questionnaire. Participants

were then administered the computerized IAT program. Once the IAT began, the

experimenter exited the room while participants completed the task. After completing

the IAT, a debriefing statement was provided that explained the purpose of the study, as

well as provided information regarding counseling services that are available in the

community.

Measures

  Demographic Information Questionnaire. The demographic questionnaire

(Appendix A) is an 8-item self-report questionnaire that recorded participants' age,

gender, race, and socioeconomic background. This questionnaire was developed to

identify participants who classify themselves as Caucasian, as well as other variables that

may have been worth examining in further analyses.

  Implicit Association Test (IAT). The IAT methodology used in the present study

is similar to Chaney et al. (2009) and others (Amodio & Devine, 2006; Avendano, 2006;

Greenwald et al., 1998; McConnell & Leibold, 2001; Ottaway, Hayden, & Oakes, 2001;

Rudman & Ashmore, 2007). Specifically, the IAT examined the strength of associations

for compatible judgment (Native American + negative/European American + positive)

and incompatible judgment (Native American + positive/European American + negative)

word-pair combinations.

  Once participants were seated at the computer, the experimenter exited the room.

Instructions for completing the task were given on the computer screen before starting the

program. Participants read:

> Participation in the computer task requires that you can read English fluently, and
> that your vision is normal or corrected to normal. If you do not consider yourself
> fluent in English, OR IT YOU ARE HAVING DIFFICULTY READING THIS
> DESCRIPTION, PLEASE ask the experimenter now whether or not you should

continue (you will receive participation credit in any case).

Our research investigates cognitive processes used in making decisions. We are seeking to develop and test theories of the cognitive processes that occur inside and outside of awareness. On this task, different stimuli will be presented to you on the computer screen, and you will enter your responses on the keyboard.

INSTRUCTIONS FOR SORTING TASKS: For each of several sorting tasks you will be shown words one at a time in the middle of the computer screen. Your task is to sort each item into its correct category as fast as you can by pressing EITHER the 'D' key or the 'K' key. The categories associated with the 'D' and 'K' keys will be shown at the top of each screen. Please pay close attention to these category labels—they change for each sorting task!

For one of the sorting tasks you will be classifying words that describe personal traits that are either
    'POSITIVE' or 'NEGATIVE'
In the other sorting task you will be classifying words that describe people of either
'NATIVE AMERICAN ' or 'EUROPEAN AMERICAN' descent
For each task, your job is to place the word into one of two categories.

Participants were told, "If you make an error you will see a red 'X' below the

stimulus—when this happens, you have to make the correct response to proceed."

Throughout the procedure after each trial/block, the participant was reminded to

"examine the next page carefully. It will tell you which keys to use for the next series of

categorization trials." Additionally, after each block, participants were given

performance feedback that included the percentage correct and mean response latency in

milliseconds.

The IAT task began with 36 practice trials which required participants to sort

Positive and Negative stereotypic descriptors into correct categories. The Positive

category appeared on the upper-left side of the computer screen, and the Negative

category appeared on the upper-right side of the computer screen. Participants assigned

the evaluative attributes (e.g., worthless, smart) to the appropriate category by pressing the 'D' key for Positive and the 'K' key for Negative.

For the second set of 36 practice trials, participants categorized target-concept words (e.g., Cherokee, Irish) into Native American or European American categories. The 'European American' and 'Native American' categories appeared either on the upper-right or upper-left side of the computer screen depending on whether compatible or incompatible pairs were presented first. The order of presentation for compatible judgment and incompatible judgment pairs were alternated between every other participant. Participants sorted the target-concept stimulus words (e.g., Choctaw, German) into the correct category by pressing the appropriate 'D' or 'K' key.

The third trial introduced either the compatible combined category (European American + Positive/Native American + Negative) or the incompatible combined category (Native American + Positive/European American + Negative). For example, participants exposed first to compatible combinations would be presented with 36 practice trials consisting of the category 'European American or Positive' located in the upper-left side of the computer screen and the 'Native American or Negative' category in the upper-right side of the computer screen. Stimulus words were sorted into the appropriate category by using the 'D' key for 'European American/Positive' and the 'K' key for 'Native American/Negative'. Following practice trials, participants conducted the same task, except they were informed that the trials are test trials. Category placement was the same as in the practice trials, and key assignments did not change. After the test trial, participants received the following instructions:

> The next few blocks will change one of the categorization tasks. You will have on-screen reminders at the top throughout the block. Please use this block to

remember the instructions and learn the task so you will be able to respond rapidly in the following blocks.

These instructions indicated that a category was going to reverse sides. For example, if participants were first asked to sort words into compatible judgment categories, target-concept category labels switch so that 'Native American' is on the left side of the screen and 'European American' is on the right; attributes did not switch. After category labels switch to their respective sides, participants were presented with 36 practice trials of sorting target-concept words into either 'Native American' or 'European American' categories.

Trial blocks 6 and 7 presented the new combined categories. For example, if participants were first asked to sort words into compatible categories in blocks 3 and 4, 'Native American or Positive' then appeared on the upper-left side of the computer screen, and 'European American or Negative' appeared on the upper-right side. Participants sorted stimulus words into the correct category by pressing the 'D' key for Native American/Positive and the 'K' key for European American/Negative. The new combination was introduced with 36 practice trials, followed by 36 test trials. At the conclusion of the IAT, the computer screen informed participants that the task is completed.

Stimuli

The six words used to describe people of Native American (Cherokee, Navajo, Sioux, Apache, Comanche, Iroquois) and European American descent (English, Irish, German, French, Scottish, Dutch) were the same as those used by Chaney et al. (2009, Study 1). The six positive traits (successful, responsible, intelligent, healthy, clean, educated) and six negative traits (worthless, lazy, dirty, fat, freeloader, poor) were

determined from two separate surveys pre-tested on introductory psychology students at Oklahoma State University. The first survey was given to 125 students and consisted of 48 stereotypes that could be used to describe a person. The stereotypes included an equal number of both positive (e.g., healthy, responsible) and negative (e.g., poor, lazy). They were instructed to circle as many of the words on the list that describe Native Americans. The negative words that were most often endorsed were worthless, lazy, dirty, fat, freeloader, primitive, poor, and drunken. The positive words that were least often endorsed were successful, responsible, intelligent, healthy, sophisticated, and clean.

The second survey was given to 40 students and was created as a valence measure to ensure target words were viewed as either inherently positive or negative. The survey comprised the most frequently chosen negative stereotypes and least frequently chosen positive stereotypes of Native Americans from the first survey, as well as an additional stereotype from Amodio and Devine (2006) (e.g., educated). Participants were asked to rate the favorability of each stereotypical trait on a Likert scale ranging from (1) to (7). Results of this survey indicated that the six most unfavorable traits were *worthless*, *freeloader*, *fat*, *poor*, *lazy* and *dirty*, and the six most favorable traits were *intelligent*, *healthy*, *responsible*, *educated, clean*, and *successful*. Finally, to more closely approximate balanced word length for both positive and negative categories, *intelligent* was replaced with *smart* (e.g., Greenwald et al., 1998; Study 2).

Results and Discussion

To analyze the IAT effect in both studies, a one sample analysis of variance was conducted, in which the value of *D* is compared to zero. If *D* is significantly different

from zero, then the IAT effect (average difference between incompatible judgment and compatible judgment pairings) is considered statistically significant.

Results for Study 1 were consistent with the primary hypothesis of the study. Specifically, Caucasian participants demonstrated negative implicit attitudes toward Native American people relative to people of European American descent. A univariate analysis of variance was conducted in which the fixed grouping factor is left blank in SPSS, such that the test compares the d value to zero. A significant IAT effect was revealed ($d = .22$, $\eta^2 = .44$), $F (1, 41) = 32.6$, $p = .001$. In other words, results indicated an implicit negative stereotype bias toward people of Native American descent relative to those of European American descent. As anticipated, responses were faster when compatible judgment pairings were presented (833 ms) than when incompatible judgment pairings were presented (987 ms).

Exploratory analyses indicated no significant gender differences in the IAT effect, $F(1,41) = 1.92$, $p = .174$. Therefore, both men [$d = .30$, $F(1,11) = 14.2$, $p = .003$] and women [$d = .19$, $F(1,28) = 19$, $p = .001$] demonstrated significant negative implicit attitudes toward people of Native American descent compared to people of European American descent.

Although the results from Study 1 demonstrated potential negative stereotype bias toward Native American people, the social implications of such attitudes are relatively unknown due to lack of empirical data. Additionally, the question remains whether these stereotype biases apply to Native American mascots relative to Caucasian mascots, as well as whether these implicit stereotypes influence actual behavior (i.e., instrumental and consummatory) toward Native Americans. Study 2 was designed to examine the

potential relationship between negative implicit stereotypes toward Native mascots and intergroup race-biased behaviors.

<center>Study 2</center>

<center>Method</center>

Participants and Procedure

Participants were 42 (25 male, 17 female) self-identified Caucasian students recruited from undergraduate psychology courses at Oklahoma State University. Participants ranged in age from 18 to 31 ($M = 21$, $SD = 2.6$). The majority of participants had a parent with a college degree (47.6%). Additionally, 28.6% of participants had a parent with a post-graduate degree, 19% had some college, 31% completed high school, and 2.4% had a parent complete middle school.

Participants were told that this study consisted of two parts that are related and occurring at different sessions. Additionally, participants were informed the purpose of the study was to examine how well they work individually on certain tasks, as well as how well they cooperate with a partner on other various tasks. The first session involved a computerized word association task to be completed individually. The second session was held two weeks later and required them to do various tasks that entailed tests of academic (mathematical and verbal) and nonacademic (general culture and environmental issues) knowledge with an assigned partner. Class credit was given for participation in both sessions.

Session 1. The first session was completed in the same manner as Study 1, except that participants were not debriefed until after the second session of the study. Participants were also given a demographic information questionnaire and attitudes survey consisting of general perceptions about various social issues, as well as embedded

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questions regarding views of Native Americans and opinions on the Native American

mascot issue. The order of completing the attitudes survey and the IAT task was

counterbalanced. In other words, half the participants received the survey before the

IAT, and half completed it after the IAT. After participants completed the first session of

the study, they were reminded of their scheduled date to return for the second session.

Measures

　　　Demographic Information Questionnaire. (Appendix A) This questionnaire was

the same 8-item self-report questionnaire used in Study 1. Participants recorded their

age, gender, race, and socioeconomic background.

　　　Attitudes Survey. The Attitudes survey (Appendix B) consisted of questions that

assessed participants' general attitudes about various social issues. Responses were rated

on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).   Importantly,

this survey contained imbedded items that assessed the degree to which participants

found the use of Native American mascots offensive. This item was included to address

a potential explanation for negative associations revealed by Chaney et al. (2009).

Specifically, they observed that individuals who construed the use of Native mascots as

offensive produced the same IAT results as those who deemed their use as an acceptable

practice. To minimize the possibility that a negative implicit bias observed on the IAT

may result from participants' social aversion to the *use* of Native American mascots, and

not to perceived negativity of Native mascots per se, participants were eliminated from

the primary analyses if they reported that they either *agree* or *strongly agree* (1 or 2 on

the scale) that the use of Native mascots is offensive. Therefore, observed results should

be due to negative implicit bias toward Native American mascots and not to negative

emotional reactions to Native American mascots because they are seen as an offensive social practice.

Implicit Association Test (IAT). The IAT used in this study examined the strength of association for compatible judgment (Native Mascot + negative/Caucasian Mascot + positive) and incompatible judgment (Native Mascot + positive/Caucasian Mascot + negative) word pair combinations. As in Study 1, the order of incompatible and compatible judgment pairings were alternated for each participant. The IAT for Study 2 was essentially the same IAT used in Study 1 except target-concepts were changed to Native mascots (e.g., Chiefs, Braves) and Caucasian mascots (e.g., Celtics, Vikings). Thus, instructions for completing the IAT task were similar to Study 1, except participants read the following:

For one of the sorting tasks you will be classifying words that describe personal traits that are either

'POSITIVE' or 'NEGATIVE'
In the other sorting task you will be classifying mascots of sports teams that are either
'NATIVE AMERICAN MASCOTS ' or "CAUCASIAN MASCOTS'
For each task, your job is to place the word into one of two categories.

Participants were first presented with 36 trials to sort positive (e.g., smart, healthy) and negative (e.g., dirty, fat) evaluative words. The 'Positive' category label appeared on the upper-left side of the computer screen, while the 'Negative' category label appeared on the upper-right side. Participants again used the 'D' key for categorizing the positive words and the 'K' key for assigning negative words.

The second block of 36 trials consisted of categorizing target-concept words that described either Native Mascots or Caucasian Mascots. As in Study 1, the 'Caucasian

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Mascot' or 'Native Mascot' categories were located either on the upper-right side or the upper-left side, depending on whether compatible or incompatible combinations were presented first. Participants sorted stimulus words by pressing the 'D' or 'K' key mapped onto the appropriate category.

For the third and fourth block of 36 trials, participants sorted target-concept (e.g., Celtics, Redskins) and attribute (e.g., smart, dirty) stimuli into compatible or incompatible combined categories. Half the participants were presented with compatible pairings first; the other half viewed incompatible categories first. Compatible judgment categories were labeled 'Native Mascot or Negative' and 'Caucasian Mascot or Positive'; incompatible judgment combined categories were labeled as 'Native Mascot or Positive' and 'Caucasian Mascot or Negative.' Stimulus words were sorted by pressing the appropriate 'D' or 'K' key. The first block were practice trials, followed by a block of test trials.

As in Study 1, target-concept stimulus words switched sides for the final three blocks of trials. Specifically, 'Native Mascot' and 'Caucasian Mascot' switched sides of the computer screen; attributes did not switch. Participants were first presented with 36 practice trials consisting of only the 'Native Mascot' and 'Caucasian Mascot' category labels after changing to their respective sides. Then, 36 practice trials and 36 test trials of the combined categories for either compatible ('Native Mascot or Negative/Caucasian Mascot or Positive') or incompatible word-pairs ('Caucasian Mascot or Negative/Native Mascot or Positive') were presented.

<u>Stimuli</u>

The six Native American (Redskins, Braves, Indians, Warriors, Chiefs, Fighting Sioux) and six Caucasian mascots (Celtics, Vikings, Pirates, Rebels, Mountaineers, and Fighting Irish) were the same as those used by Chaney et al. (2009, Study 2). The six positive traits (successful, responsible, smart, healthy, clean, educated) and six negative traits (worthless, lazy, dirty, fat, freeloader, poor) were the same attributes from Study 1.

Session 2. Thirty-three participants (18 male, 13 female) returned to complete the second session. Out of the returning participants, the age ranged from 18 to 31 ($M = 21$, $SD = 2.8$). The majority of returning participants had a parent with a college degree (48.5%). Additionally, 27.3% of participants had a parent with a post-graduate degree, 18.2% had some college, and 36.4% completed high school.

Session 2. Similar to Amodio and Devine (2006; Study 3), participants were led to believe that they would be interacting with a Native American partner on tasks involving tests of academic (verbal and mathematic) and nonacademic (general culture and environmental issues) knowledge. When each participant arrived, the experimenter informed them they would be filling out paperwork separately from their partner, and the participant was then led into the experiment room. The experimenter asked if his/her name is the participant's name or the (imaginary) partner's. The partner's name alternated between *Joe Tallchief* and *Joanna Tallchief*, depending on the participant's gender. Female participants heard the name Joanna Tallchief; male participants heard Joe Tallchief. The last name *Tallchief* was derived from a survey given to 60 introductory psychology students at the same university. The survey required them to list as many last names as they could think of that were easily recognized as being Native

American origin. *Tallchief* was the name most frequently listed on the survey as being readily identifiable as a Native American person.

Ostensibly due to the partner not yet arriving, the experimenter told the participant that he/she could begin part of the task. Participants were given the following instructions (Amodio & Devine, 2006; Study 3):

We're studying people's abilities to cooperate with another person on some tasks assessing different types of general knowledge. You and a partner are going to complete a set of tasks, and then your combined score on these tasks will be compared with other teams who are in this study. You should try your best on these tasks, because the teams with the top five combined scores will be entered into a drawing for $100 each.

The experimenter then exited the room to see if the other participant had arrived while the participant rated his/her own abilities in various areas such as mathematic and verbal skills and their knowledge of general culture and environmental issues. After a few minutes had passed, the experimenter returned to the room and told the participant that their partner had arrived and was filling out the consent form and questionnaires. The participant was then given an information sheet with the partner's name (Joe Tallchief/Joanna Tallchief), race (Native American), age (19), and year in school (Sophomore). Participants were asked to fill out their information underneath the partner's.

The experimenter then commented that the session was running behind schedule and gave the following instructions (Amodio & Devine, 2006; Study 3):

To save time, I'm going to have you decide which tasks you'll do and which your partner will do. Then we'll all go to the main testing room. Remember, you want to choose tasks for yourself and your partner that will give you the best combined score, not just so that only you or he/she will do well. There are 2 different tasks consisting of academic and nonacademic knowledge: one has questions from the math SAT and verbal SAT, and the other has questions about general cultural knowledge and environmental issues.

After participants chose their tasks and their partner's tasks, they provided ratings on how well they expected themselves and their partners to perform on each of the tasks. The experimenter left briefly to check on the partner, and then informed participants that they and their partner would now meet in the main testing room to complete the tasks. The experimenter led the participant into the waiting room and explained that the partner left to use the restroom. Participants were asked to sit and wait. Eight identical chairs were arranged in a line against the wall, equally spaced apart in the waiting room. A Pendleton backpack ostensibly belonging to the partner was placed on the chair closest to the doorway. After the participant sat down, the experimenter discreetly recorded the participant's seating position. The experimenter then probed the participant for suspicion regarding the cover story by asking, "What do you think the purpose of this experiment is?" Finally, participants were debriefed for both sessions of the experiment and were given a full explanation of the experiment and procedures before being dismissed.

Measures

Rating Scales. On a scale ranging from 1 (*very poorly*) to 9 (*very well*), participants rated how well they think they would perform on tests of SAT mathematic and verbal skills, as well as general cultural knowledge and environmental issues. They were also asked to rate their expected enjoyment on each task on a scale ranging from 1 (*not at all*) to 9 (*very much*) (Appendix C). Using the same scales, participants were asked to rate their expectations of their partner's performance and enjoyment on the same tasks (Amodio & Devine, 2006; Study 3) (Appendix D).

<center>Results</center>

IAT Results

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Forty-two participants arrived for the first session of Study 2. Seven of those participants answered *agree* (rating of 1) or *strongly agree* (rating of 2) to the question, "The use of Indian sports mascots is offensive" and were removed from all primary analyses. For the remaining participants ($N = 35$), mascot IAT results were consistent with the primary hypothesis. Response latencies were significantly faster for compatible judgment combinations ($M = 876$ *ms*) compared to incompatible judgment combinations ($M = 1030$ *ms*), $d = .20$, $\eta^2 = .38$), $F(1,33) = 21.2$, $p = .001$. Thus, participants demonstrated a negative implicit preference for words describing Native American mascots relative to words describing Caucasian mascots.

In the sample of participants who returned for the second session of Study 2 ($N = 27$), results also indicated a negative implicit bias toward Native mascots relative to Caucasian mascots ($d = .14$, $\eta^2 = .30$), $F(1, 25) = 11.4$, $p = .002$. Response latencies were significantly faster for compatible judgment pairings ($M = 891$ *ms*) compared to incompatible judgment pairings ($M = 1012.6$ *ms*). Exploratory analyses indicated no significant gender differences in the IAT effect for those who returned for session 2, $F(1, 25) = .612$, $p = .441$.

Stereotype Expectations of Task Performance

It was hypothesized that mascot IAT performance (*D*) would be predictive of stereotype expectations of task performance (i.e., instrumental behaviors). Specifically, an index was created to represent the extent to which participants exhibited stereotype expectations, characterized by the expectation that they would do better than their partner (Native American) on academic tasks, but that the partner would do better on nonacademic tasks. This index of stereotype expectations was created by subtracting

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participants' self-expectation ratings on each task from partner-expectation ratings on the same task. These scores were standardized into z-scores.

To generate an index in which higher values on all discrepancy scores reflect greater stereotyping, academic task ratings were reverse-coded (i.e., 9=1, 8=2, etc.). Discrepancy scores for both academic and non-academic tasks were averaged and reflected stereotype-consistent expectations of the partner's performance relative to self-performance expectations (e.g., Amodio & Devine, 2006). Pearson's zero-order correlation was used to examine the relationship between mascot IAT performance (D) and stereotype-biased task expectations. Correlations revealed that mascot IAT performance (D) was not predictive of stereotype expectations of task performance (i.e., instrumental behaviors), $r(1, 25) = .049$, $p = .809$ (see Appendix E for descriptive statistics).

Social Distance

It was hypothesized that mascot IAT performance (D) would be related to social distance (i.e., consummatory behaviors). Specifically, it was anticipated that greater negative implicit associations on the mascot IAT would be related to increased seating distance from the Native American student's belongings prior to interaction with the hypothetical student. On average, participants sat 3.3 chairs from the partner's belongings (range = 2 to 5). Pearson's zero-order correlation was used to examine the association between IAT performance (D) and seating distance. The relationship between IAT performance and seating distance was not significant, $r(1, 25) = .20$, $p = .31$ (see Appendix E for descriptive statistics).

Stereotype Expectations of Non-Academic Task Enjoyment

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Ratings of expected partner enjoyment on the two stereotype-consistent tasks (i.e., non-academic tasks) were averaged. Pearson's zero-order correlation revealed a significant relationship between IAT performance and expected partner enjoyment on non-academic tasks, $r(1, 25) = .39$, $p = .04$. Alternately, IAT performance was not related to perceived partner enjoyment on academic tasks (i.e., mathematics, verbal skills), $r(1, 25) = -.073$, $p = .717$. Thus, consistent with hypotheses, greater implicit stereotyping on the mascot IAT (D) was related to greater perceived partner enjoyment on stereotype-consistent tasks (i.e., culture, environmental issues)(see Appendix E for descriptive statistics).

Task Assignment

It was hypothesized that mascot IAT performance (D) would be related to assignment of the non-academic knowledge task (i.e., cultural knowledge, environmental issues) to the partner. Participant's choice of task for their partner was coded (1 = academic; 2 = non-academic) and sum scores were calculated. Pearson's zero-order correlation revealed no relationship between IAT performance and assignment of tasks, $r(1, 25) = -.10$, $p = .64$. Interestingly, 63% chose for the partner to complete the nonacademic material, while 37% of participants chose for their partner to complete the academic tasks.

CHAPTER IV

GENERAL DISCUSSION

Native American sports mascots have become a controversial media subject in recent years, with the greater part of information emanating from highly publicized polls and surveys supporting the popular claim that Native American mascots are honorable representations of Native American culture and people (e.g., Sports Illustrated, 2002). Except for surveys demonstrating opposition to Native American mascots (e.g., Fenelon, 1999; University of North Dakota, 2000), there are few empirical data regarding the Native mascot issue, particularly research investigating potential untoward social implications of Native American mascots. One exception is a series of studies by Fryberg et al. (2008) demonstrating the negative effect of Native mascots on Native American students' self-efficacy and achievement-related expectancies. However, the social implications of how Native mascots are construed by non-Native individuals have not been studied.

The present set of studies utilized the Implicit Association Test (IAT; Greenwald et al., 1998) to examine potential implicit stereotype biases among non-Native individuals toward Native American people and Native American mascots. The present studies also investigated the social implications of these Native mascot stereotypes by

examining the relation between Native mascot stereotype bias on the IAT and race-biased behaviors toward Native people.

Consistent with existing studies utilizing stereotypes (e.g., lazy, smart) as attributes for judgment categories (Amodio & Devine, 2006; Rudman & Ashmore, 2007), Study 1 demonstrated a negative stereotype bias toward Native American people. Response latencies were significantly shorter for compatible judgment combinations (e.g., Native American + negative/European American + positive) than for incompatible combinations (e.g., Native American + positive/European American + negative). In Study 2, stereotypes were again utilized as attributes and target stimuli were composed of words describing Native American (e.g., Chiefs) and Caucasian (e.g., Vikings) mascots on an evaluative stereotype IAT. Results from Study 2 indicated a similar negative evaluative stereotype bias toward Native American mascots relative to Caucasian mascots (i.e., response latencies were significantly shorter for compatible judgment categories relative to incompatible categories). Consistent with existing studies (e.g., Chaney, Burke, & Burkley, 2009), Native people and Native mascots may be indistinguishable to the extent that they both elicit similar negative stereotype biases.

Further, one of the four proposed hypotheses regarding the relation between IAT mascot bias and race-biased interactions was supported. Specifically, participants who demonstrated greater Native Mascot IAT bias were significantly more likely to perceive their Native American partner as enjoying stereotype-consistent tasks (e.g., cultural and environmental knowledge). In other words, greater implicit stereotype bias toward *symbolic representations* of Native people (i.e., Native mascots) was related to the expectation that a Native *person* would be more likely to enjoy tasks of a non-academic

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nature. These findings indicate that implicit stereotype bias toward Native American mascots may be related to stereotype expectations (i.e., judgments) of Native American people. Although the majority of the hypotheses regarding behavioral predictions of IAT performance were not supported, the present data provide suggestive evidence that Native American mascots are not merely insignificant representations of Native Americans and may have social implications for the perpetuation of stereotypes of Native American people.

There are several explanations for why the majority of anticipated IAT bias-social behavior relations were non-significant. First, it is possible that findings were limited due to the nature of the measures used to assess race-biased behavior. Specifically, it is quite possible that the methods of examining behavioral outcomes (e.g., task assignment, performance expectations, seating distance) were not sufficiently discreet to evoke *automatic* stereotype-biased behaviors. To illustrate, although 92.6% of returning participants believed the study's deception (i.e., that they would be working with a Native American partner), during debriefing nearly half reported that they thought the purpose of the study was to investigate their perceptions of Native Americans. Thus, the transparency of the study design and/or the behavioral measures may have resulted in more conscious, deliberate responses rather than automatic race-biased responses. Consequently, more socially desirable or less prejudicial judgments and behavior may have resulted. Perhaps future studies should employ behavioral outcome measures that assess racial discrimination more generally, such as past occurrences of verbal, defensive, and offensive behaviors toward minority groups or assessing economic discrimination toward various minority groups (e.g., Rudman & Ashmore, 2007).

The nature of the stimuli used in the present IAT may have also contributed to the lack of significant findings. The IAT used in Study 2 to examine the relation between biased IAT performance and biased behavioral responses was comprised of stimulus words derived from a pre-study survey that specifically asked participants to "Write down the most common stereotypes you have heard about Native American people." The items that were most frequently endorsed and the items least frequently endorsed were used to make up the stimulus items in the present IAT, which included both negative and positive stereotype words as attributes for judgment categories. Because racial prejudice (e.g., evaluation) has been shown to predict discriminatory (e.g., consummatory) behavior, and because stereotyped attitudes are associated with stereotyped expectations (Dovidio, Brigham, Johnson, & Gaertner, 1996; Fiske, Harris, Lee, & Russell, 2009; Stangor, Sullivan, & Ford, 1991; Talaska, Fiske, & Chaiken, in press; Tropp & Pettigrew, 2005), it was anticipated that such a combined evaluative stereotype IAT would predict both consummatory (e.g., social distance) and instrumental (e.g., stereotype expectations) behaviors. However, it is possible that because the stimulus items were largely stereotypical in nature (and not evaluative or prejudicial) biased responses on the IAT in Study 2 largely reflected stereotype attitudes and not prejudicial (positive-negative) attitudes. Thus, although the Mascot IAT included both positive and negative stereotype words, it may have functioned more as a measure of stereotype bias rather than prejudicial bias, which explains the predictive relation between the biased Mascot IAT performance and stereotype-consistent instrumental behavior (e.g., expected enjoyment) and the absence of any link between IAT bias and evaluative or consummatory behaviors (e.g., social distance). Future studies examining the potential association between biased

IAT performance and instrumental and/or consummatory behaviors should employ both a purely stereotype IAT and a purely evaluative IAT to fully explicate these relationships.

Additional Considerations

Although the IAT data from the present studies were interpreted as an indication of a negative stereotype bias toward Native people and mascots, alternative explanations warrant consideration. First, in both Studies 1 and 2, the faster associations observed on the IAT for compatible judgment categories compared to incompatible categories could have been due to participants' greater familiarity with words describing people of European descent (e.g., German, French) and Caucasian mascots (e.g., Vikings, Celtics), resulting in favorability for ingroup (i.e., Caucasian) stimulus items. In other words, the present IAT results may not reflect a negative implicit bias due to negative evaluations of Native people or mascots, but may be a function of increased favorability for ingroup stimulus items due to greater familiarity with those words (see Zajonc, 1968). Although perceived favorability for familiar stimulus items cannot be completely ruled out as an explanation for the present results, previous studies have demonstrated that familiarity cannot explain the totality of IAT findings in the literature (e.g., Dasgupta, Greenwald, & Banaji, 2003; Dasgupta, McGhee, & Banaji, 2000; Ottaway et al., 2001). Additionally, the IAT target stimuli utilized in the present studies were derived from pre-study surveys conducted at the same university with a similar Caucasian college student sample. Specifically, students in that survey were asked to generate a list of the most common Native American tribes and popular Native mascots (see Chaney et al., 2009). It is unlikely that students participating in the survey listed items that were both common and

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unfamiliar; it is equally improbable that participants in the current study were unfamiliar with the target stimuli generated by cohorts at the same institution. Thus, it is not likely that the present findings represent positive associations largely due to familiarity with non-Native stimulus words.

Further, the observed negative associations toward Native American people and mascots observed on the IAT were interpreted as demonstrating negative stereotype evaluations based on racial prejudice or dislike. However, it is possible that the present findings are a result of egalitarian negative associations based on historical awareness of the hardship and plight of Native Americans (e.g., Uhlmann, Brescoll, & Paluck, 2006). In other words, the negative IAT biases found in Studies 1 and 2 could reflect participants' identification with Native Americans as a historically oppressed group, which may have produced automatic negative associations that do not necessarily reflect antipathy or dislike (see Florak, Scarabis, & Bless, 2001; Hugenberg & Bodenhausen, 2004). Thus, egalitarian negative associations, and not genuinely negative racial attitudes, could be a possible explanation for the automatic negative associations toward Native Americans and Native mascots observed in the present studies. Unfortunately, all existing measures of implicit bias (e.g., Affect Misattribution Procedure [AMP], Payne, Cheng, Govorum, & Stewart, 2005), Go/No-Go Association Test [GNAT], Nosek & Banaji, 2001; Single Category Implicit Association Test [SC-IAT], Karpinski & Steinman, 2006) suffer from a similar shortcoming, in that they are limited in their ability to assess only the sum total of negative/positive associations with target objects and are not capable of identifying the specific source of negative affect associated with a target group (Payne, Burkley, & Stokes, 2008). Therefore, Native mascot IAT performance

may not have translated behaviorally due to IAT results possibly reflecting egalitarian associations that do not represent dislike or prejudice toward Native Americans in a social interaction. In other words, if IAT scores are representing purely egalitarian feelings of empathy for the plight of Native American oppression, the mascot IAT may not be predictive of negative behavioral outcomes.

Although this explanation is plausible, similar studies indicate that explicit construal of Native mascots as offensive and/or dishonorable is unrelated to implicit negative bias toward Native mascots observed on the IAT (e.g., Chaney et al., 2009). In addition, Study 2 was designed to minimize potential egalitarian negative associations by removing participants who indicated that they were offended by the use of Native mascots on the attitudes survey (which represented a relatively small margin of the total sample). Although the potential influence of egalitarian negative associations cannot be ruled out entirely as an alternative explanation for the current findings, it is doubtful that the present results are due to egalitarian negative associations with the plight of Native Americans when participants in the sample explicitly endorsed Native mascots a socially acceptable (i.e., inoffensive) practice.

An additional methodological confound inherent in the IAT is that it lacks an absolute zero-point. As a result, it cannot be stated unequivocally that the present results were due to a negative stereotype evaluation of Native people and mascots in an absolute sense. To illustrate, Brendl et al. (2001) demonstrated several plausible explanations for significant IAT results, other than an absolute negative bias. For example, it is possible that both Caucasian and Native American stimuli were evaluated positively, but Caucasian stimuli were evaluated more positively. Likewise, it is also plausible that

participants evaluated both Caucasian and Native American stimuli negatively; however Native American stimuli were merely evaluated more negatively than Caucasian stimuli. It could also be argued that the present results represent positive evaluations of Caucasian stimuli with neutral evaluations of Native American people or mascots.

Although the present data are consistent with an interpretation suggesting a negative stereotype bias toward Native people and mascots, a relative difference in stereotype performance could have produced the same results (see also Blanton & Jaccard, 2006). However, results from Study 2 suggest that regardless of absolute positive or negative stereotype bias of target groups, the relative difference in stereotype bias on the Mascot IAT has a relationship with social judgments of Native American people. Likewise, previous studies indicate that even relative differences observed by IAT performance are predictive of race-biased behavior and other socially meaningful outcomes (e.g., Amodio & Devine, 2006; Avendano et al., 2006; McConnell & Leibold, 2001; Rudman & Ashmore, 2007). Although the majority of hypotheses regarding the connection between the Mascot IAT and race-biased behaviors was not supported in the current study, future research should examine this connection further with various methodological improvements. To illustrate, future studies examining implicit bias toward Native people and mascots could employ different measures of social cognition that do not use opposing judgment categories (i.e., compatible vs. incompatible) and/or do not assess automatic associations by comparing response latency times (e.g., AMP, GNAT, IAT, SC-IAT) in determining the occurrence of implicit bias. Therefore, these alternative measures are better equipped to address the zero-point problem and may

provide for a more precise assessment of the association between individual target concepts and stereotype/evaluative attributes.

Summary and Conclusions

In conclusion, the present set of studies demonstrated an implicit stereotype bias toward Native Americans and Native mascots based on IAT performance. Further, although three out of four hypotheses regarding race-biased behavioral predictions of IAT performance were non-significant, Native Mascot IAT performance was related to stereotyped expectations (i.e., judgments) toward a Native American student. Specifically, participants who demonstrated greater implicit stereotype bias on the Mascot IAT were significantly more likely to perceive their Native American partner as enjoying nonacademic material (e.g., environmental and cultural knowledge). These findings indicate that implicit stereotype bias toward Native American *mascots* may be related to stereotype judgments (i.e., instrumental behavior) of Native American *people*. Therefore, Native American mascots are not merely innocuous symbols; they seem to have socially meaningful consequences for Native American people.

Further, the present data support conceptualizing the Mascot IAT as a measure of stereotype bias rather than prejudicial bias; this provides suggestive evidence that implicit stereotype bias elicited on the Mascot IAT has predictive ability in determining instrumental (i.e., judgments, initial impression) behaviors toward Native Americans. Because Native mascots and Native people appear to be indistinguishable, the mere existence of Native American mascots may perpetuate these stereotype judgments (i.e., instrumental behavior) of Native people, resulting in various social consequences. To illustrate, if the Mascot IAT is indeed a predominantly stereotype-based measure,

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previous research would suggest Mascot IAT performance was driven primarily by cognitive processes (e.g., Amodio & Devine, 2006) which have been predictive of further endorsement of stereotypes and support for policies that disadvantage minority group members (Dovidio et al., 2004). Thus, individuals who hold implicit stereotype biases toward Native American mascots may also possess stereotypes/judgments about Native American people. Consequently, the presence of Native mascots may propagate stereotypes of Native Americans and serve to perpetuate their disadvantaged status in current society. Indeed, the present findings are contradictory to popular claims that Native American mascots are simply positive representations of Native people and culture.

Moreover, if the majority group (e.g., self-identified Caucasians) of organizations and societal institutions believe that Native Americans would significantly enjoy nonacademic material, this could likely marginalize Native Americans by steering them toward occupations and activities that reflect this stereotype judgment. In other words, individuals who hold these stereotype expectations could substantially impact job hiring and occupational categorizations of Native people. Further, this stereotype judgment could greatly affect Native American children in school if teachers hold these stereotype expectations of Native students enjoying certain activities more than others. Previous literature has documented that children learn about social identities of themselves and others, which become salient in certain situations and impact social behavior and stereotype judgments (Levy & Hughes, 2009). Particularly for children who attend a school with a Native American caricature as the school mascot, Native American children may adopt these stereotype consistent expectations of themselves, as well as

non-Native children holding stereotype judgments of Native children. For both Native American adults and children alike, if the larger social group holds these beliefs about Native Americans, Native people may also hold the self-expectation that they may succeed more in activities of nonacademic domain; thus, a self-fulfilling prophecy may occur that influences Native Americans' choices and behavior. Ultimately, Native people may come to accept these beliefs associated with their group (see Stangor, 2009).

Identification of specific social/behavioral consequences due to the use of Native American mascots remains somewhat unclear. This is an area that deserves more attention and exploration to further examine how implicit stereotype and evaluative bias toward Native mascots translates into other race-biased behaviors and untoward interactions with Native American people. In order to investigate this issue, future studies should consider employing more robust assessments for measuring discriminatory behavior toward racially dissimilar group members. For example, perhaps future studies could employ various behavioral outcome measures that assess racial discrimination more generally, such as past occurrences of verbal, defensive, and offensive behaviors toward minority groups or assessing economic discrimination toward various minority groups (e.g., Rudman & Ashmore, 2007). Further, the Mascot IAT's predictive ability for instrumental versus discriminatory behavior toward Native American people remains questionable due to the present Mascot IAT's combined evaluative/stereotype nature. Future research should investigate the possible connection between biased Mascot IAT performance and stereotype judgment/discriminatory behaviors by designing a relatively pure stereotype IAT and separate evaluative IAT to fully clarify these relationships. Importantly, clarifying the difference between performance outcomes on an evaluative

versus stereotype IAT would allow further exploration of how these implicit biases

impact social interactions and stereotype judgments of Native American people.

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Participant # _____

DEMOGRAPHIC INFORMATION

1. Age: _____   2. Gender: _____   3. Race/Ethnicity: _____

4. What is your country of birth? USA:_____   Other:_____

For item 5, refer to the parents/guardians with whom you spent the majority of your upbringing.

5. What are/were your parents/guardians' education level (circle one for each)?

Father

    1) Middle School

    2) High School

    3) Some college (specify # of years: _____)

    4) College degree

    5) Post-graduate degree

Mother

    1) Middle School

    2) High School

    3) Some college (specify # of years: _____)

    4) College degree

    5) Post-graduate degree

ATTITUDES SURVEY

PARTICIPANT# _____

Using the scale below, please indicate the extent to which you agree or disagree with the following statements by circling the number associated with your answer**. Remember, your answers are confidential.**

KEY

Strongly Disagree	**Disagree**	**Don't Agree or Disagree**	**Agree**	**Strongly Agree**
-2	**-1**	**0**	**1**	**2**

1. Some groups of people are just more worthy than others.

-2	**-1**	**0**	**1**	**2**

2. It would be a good idea if all groups could be equal.

-2	**-1**	**0**	**1**	**2**

3. In getting what your group wants, it is sometimes necessary to use force against other groups.

-2	**-1**	**0**	**1**	**2**

4. Group equality should be our ideal.

-2	**-1**	**0**	**1**	**2**

5. The use of Indian sports mascots honors Native Americans.

-2	**-1**	**0**	**1**	**2**

6. Affirmative action for minorities in education is unfair to Whites.

-2	**-1**	**0**	**1**	**2**

7. All groups should be given an equal chance in life.

-2	**-1**	**0**	**1**	**2**

8. Superior groups should dominate inferior groups.

-2	**-1**	**0**	**1**	**2**

9. We should do what we can to equalize conditions for different groups.

-2	**-1**	**0**	**1**	**2**

10. Affirmative action in education gives opportunity to qualified minorities who might not have had a chance without it.

-2   -1   0   1   2

11. Native Americans were basically wild creatures before the arrival of White men.

-2   -1   0   1   2

12. To get ahead in life, it is sometimes necessary to step on other groups.

-2   -1   0   1   2

13. If certain groups of people stayed in their place, we would have fewer problems.

-2   -1   0   1   2

14. Increased social equality would be a good thing.

-2   -1   0   1   2

15. Affirmative action forces colleges and universities to admit unqualified students.

-2   -1   0   1   2

16. The use of Indian sports mascots is offensive.

-2   -1   0   1   2

17. It's probably a good thing that certain groups are at the top and other groups are at the bottom.

-2   -1   0   1   2

18. We would have fewer problems if we treated different groups more equally.

-2   -1   0   1   2

19. Inferior groups should stay in their place.

-2   -1   0   1   2

20. We should strive to make incomes more equal.

-2   -1   0   1   2

21. No one group should dominate in society.

-2   -1   0   1   2

22. Sometimes other groups must be kept in their place.

-2   -1   0   1   2

23. Affirmative action helps make sure that the American education system remains competitive.

-2   -1   0   1   2

-2   -1   0   1   2

Performance perceptions

We are interested in how well you think you will do each of the tasks (including the ones that your partner will do). Also rate how much you'd enjoy the test. Please make your ratings below. Be honest and answer to the best of your ability.

1. SAT math

    How well do you think you'll do?

1	2	3	4	5	6	7	8	9
very poorly				average				very well

    How much do you think you'll enjoy the math task?

1	2	3	4	5	6	7	8	9
not at all				neutral				very much

2. SAT verbal

    How well do you think you'll do?

1	2	3	4	5	6	7	8	9
very poorly				average				very well

    How much do you think you'll enjoy the verbal task?

1	2	3	4	5	6	7	8	9
not at all				neutral				very much

3. Cultural knowledge

    How well do you think you'll do?

1	2	3	4	5	6	7	8	9
very poorly				average				very well

    How much do you think you'll enjoy the cultural knowledge task?

1	2	3	4	5	6	7	8	9
not at all				neutral				very much

4. <u>Environmental issues</u>

How well do you think you'll do?

1	2	3	4	5	6	7	8	9
very poorly				average				very well

How much do you think you'll enjoy the environmental issues task?

1	2	3	4	5	6	7	8	9
not at all				neutral				very much

APPENDIX D

Performance perceptions <u>for partner</u>

We are also interested in our perceptions of how well you think <u>your partner</u> will do each of the tasks (including the ones that your partner will do), and how much he or she will enjoy the tasks. Although this questionnaire is completed before you actually meet your partner, just answer with your best guess or gut feeling. Make your ratings below, and please be completely honest.

1. <u>SAT math</u>

   How well do you think your partner will do?

1	2	3	4	5	6	7	8	9
very poorly				average				very well

   How much do you think your partner will enjoy the math task?

1	2	3	4	5	6	7	8	9
not at all				neutral				very much

2. <u>SAT verbal</u>

   How well do you think your partner will do?

1	2	3	4	5	6	7	8	9
very poorly				average				very well

   How much do you think your partner will enjoy the verbal task?

1	2	3	4	5	6	7	8	9
not at all				neutral				very much

3. <u>Cultural knowledge</u>

   How well do you think your partner will do?

1	2	3	4	5	6	7	8	9
very poorly				average				very well

How much do you think your partner will enjoy the cultural knowledge task?

    1   2   3   4   5   6   7   8   9
not at all   neutral   very much

4. Environmental issues

How well do you think your partner will do?

    1   2   3   4   5   6   7   8   9
very poorly   average   very well

How much do you think your partner will enjoy the environmental issues task?

    1   2   3   4   5   6   7   8   9
not at all   neutral   very much

APPENDIX E

Descriptive Statistics for Study 2

	Mean	Range	Standard Deviations
Academic performance of self	6	3.5 to 8.5	1.4
Academic performance of partner	6	0 to 8	1.6
Nonacademic performance of self	5.8	2.5 to 8	1.3
Nonacademic performance of partner	6.3	3.5 to 8	1.1
Academic enjoyment of partner	5	1 to 7	1.4
Nonacademic enjoyment of partner	5.4	1 to 7.5	1.4
Seating Distance from partner	3.3	2 to 5	.9

Participant # _____

Thank you for participating in our study. Before you fill out the survey and complete the computer task, please read the following consent form and sign below.

Consent Form

I hereby authorize John M. Chaney, Ph.D. or his research assistant to examine and record my responses on the computer task that will follow this consent form. I understand the following:

- John M. Chaney, Professor of Psychology at Oklahoma State University and his research team, is conducting this study.
- I should be able to complete this task in less than one hour.
- There are no risks posed to me by completing this task
- If course credit is being offered for my participation, I understand that my instructor has made alternative means of attaining this credit available. See your instructor for other research credit options.
- I understand that this task will be measuring my response times to a word association task on the computer. The purpose of this experiment is to see how quickly people associate certain words into different categories. This is done by pressing two designated keys on the keyboard to place a word into one of two categories.
- My responses will be anonymous, entered into the computer under a numerical code and kept separate from this consent form.
- If I have any questions regarding this survey, I may contact ~~A~~ through the Department of Psychology in room 215 of North Murray Hall (phone number 405-744-6027).
- My participation is voluntary and I will not be penalized if I choose not to participate. I am free to withdraw my consent and end my participation at any time without penalty if I notify the investigators listed above.
- If I have questions regarding my rights as a research participant, I may contact Dr. Sue Jacbos, IRB Chair, 219 Cordell North (405-744-1676) or at irb@okstate.edu.

I have read and fully understand this consent form. I sign freely and voluntarily. A copy has been given to me.

Date: _____   Time: _____ (a.m./p.m.)

Name: _____
          (Printed)   (Signature)

Address: _____

Telephone: _____   Email: _____

Witness: _____

Please note that two copies of this form are attached to the survey. Sign and date each and make sure the person administering the survey signs as a witness and gives you a copy. Please be sure to include your contact information, as we may wish to consider you for participation in later studies conducted in our laboratory. Thanks again for taking time to complete our computer task.

Oklahoma State University Institutional Review Board

Date   Wednesday, February 28, 2007   Protocol Expires: 2/27/2008

IRB Application No: AS0479

Proposal Title: Implicit Attitudes of Caucasian College Students Toward Native American

Reviewed and   Expedited
Processed as: **Continuation**

Status Recommended by Reviewer(s):   **Approved**

Principal
Investigator(s) :

Amanda Burke   John M. Chaney
215 N. Murray   215 N. Murray
Stillwater, OK 74078   Stillwater, OK 74078

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modifications to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

☑ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

Signature :

Sue C. Jacobs, Chair, Institutional Review Board

Wednesday, February 28, 2007
Date

Thank you for participating in our study. Before you fill out the survey and complete the tasks, please read the following consent form and sign below.

Consent Form

By signing this consent form, you are authorizing John M. Chaney, Ph.D. or his research assistant to examine and record your responses on the tasks that will follow this consent form. Understand the following:

- John M. Chaney, Professor of Psychology at Oklahoma State University and his research team, is conducting this study.
- You should be able to complete both tasks in one hour combined.
- There are no risks posed to you by completing this task
- 1 hour of Course credit is being offered for your participation, Understand that your instructor has made alternative means of attaining this credit available by attending research colloquiums, writing research papers, etc. See your instructor for other research credit options.
- The first task will be measuring your response times to a word association task on the computer. The purpose of this experiment is to see how quickly people associate certain words into different categories. This is done by pressing two designated keys on the keyboard to place a word into one of two categories.
- The second task will be working with a partner on tests of academic and nonacademic knowledge to see how you work with others on various tasks.
- The teams during the second task with the top 5 combined scores will be entered into a drawing for a cash prize of $100 dollars each ($100 for you and $100 for your partner).
- Your responses will be anonymous, entered into the computer under a numerical code and kept separate from this consent form.
- If you have any questions regarding this study, you may contact Amanda L. Burke, Maria Welch, or John M. Chaney through the Department of Psychology in room 116 of North Murray Hall (phone number 405-744-6027).
- Your participation is voluntary and you will not be penalized if you choose not to participate. You are free to withdraw your consent and end your participation at any time without penalty if you notify the investigators listed above.
- If you have questions regarding your rights as a research participant, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078 (405-744-1676) or at irb@okstate.edu.

By signing this form, you demonstrate that you understand informed consent, you are signing freely and voluntarily, and a copy is being given to you.

Date: _____   Time: _____ (a.m./p.m.)

Name: _____
                    (Printed)   (Signature)
*Address: _____

*Telephone: _____   *Email: _____

Witness: _____
*Please note that two copies of this form are attached to the survey. Sign and date each and make sure the person administering the survey signs as a witness and gives you a copy. Please be sure to include your contact information if you wish to participate in later studies conducted in our laboratory. Thanks again for taking time to complete our experiment.

Okla. State Univ.
IRB
Approved 2/28/08
Expires 3/27/09
IRB# A-0811
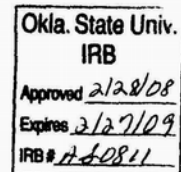
Oklahoma State University Institutional Review Board

Date: Thursday, February 28, 2008

IRB Application No AS0811

Proposal Title: Behavioral Correlates of Evaluation and Stereotyping of Native American Mascots

Reviewed and Processed as: Expedited

Status Recommended by Reviewer(s): Approved   Protocol Expires: 2/27/2009

Principal Investigator(s):

Amanda Burke	Maria Welch	John M. Chaney
116 N. Murray	116 North Murray	116 N. Murray
Stillwater, OK 74078	Stillwater, OK 74078	Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☑ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,

Shelia Kennison, Chair
Institutional Review Board

VITA

Amanda L. Burke

Candidate for the Degree of

Doctor of Philosophy

Dissertation: BEHAVIORAL CORRELATES OF IMPLICIT EVALUATION AND
STEREOTYPING OF NATIVE AMERICAN MASCOTS

Major Field: Psychology

Biographical:

Personal Data: Born in Oklahoma City on May 21, 1981 to Dr. James and
Linda Burke

Education: Graduated from Edmond North High School, Edmond, Oklahoma, in
May 1999; received a Bachelor of Arts degree in Psychology with a minor
in Sociology from Oklahoma State University, Stillwater, Oklahoma, in
May 2003; received a Master of Science degree in Psychology from
Oklahoma State University, Stillwater, Oklahoma, in July 2006.
Completed requirements for Doctor of Philosophy degree with a major in
Psychology at Oklahoma State University, Stillwater, Oklahoma, in July
2009.

Experience: Teaching Assistant for two years, 2003-2004, 2005; Graduate
Teaching Instructor, 2004-2008; Clinical practicum at Psychological
Services Center, 2003-2008 Cherokee Nation Behavioral Health Services,
2005-2006, Tulsa Indian Health Services, 2006-2007, VA Medical Center,
2007-2008; Clinical Psychology internship at OU Health Sciences Center,
2008-2009.

Professional Memberships: American Psychological Association, Southwestern
Psychological Association, Society of Indian Psychologists, Association
for Behavioral and Cognitive Therapies.

Name: Amanda L. Burke   Date of Degree: July, 2009

Institution: Oklahoma State University   Location: Stillwater, Oklahoma

Title of Study: BEHAVIORAL CORRELATES OF IMPLICIT EVALUATION AND
            STEREOTYPING OF NATIVE AMERICAN MASCOTS

Pages in Study: 80   Candidate for the Degree of Doctor of Philosophy

Major Field: Psychology

Scope and Method of Study: The purpose of the present studies was to examine implicit
      biases toward Native American people and mascots using an Implicit Association
      Test (IAT), as well as to investigate the relationship between Native mascot IAT
      performance and race-biased behaviors toward Native Americans. Participants in
      Study 1 were 43 Caucasian students enrolled in psychology courses at Oklahoma
      State University. Participants individually completed the Implicit Association
      Test (IAT), which examined implicit bias toward Native people compared to
      Caucasian people. Participants in Study 2 were 42 Caucasian students enrolled at
      the same university. Each participant individually completed an attitudes survey
      and an IAT. The IAT examined implicit bias toward Native American mascots
      compared to Caucasian mascots. Additionally, 27 participants returned in 2 weeks
      for a second session involving working with a partner on tasks of various subjects
      (academic and nonacademic). Participants were told their partner was Native
      American, and they answered questions regarding perceived performance and
      enjoyment expectations of their partner, assigned which tasks the partner and
      themselves would complete, and were measured on how far they sat from their
      partner's belongings in a laboratory setting. A univariate analysis of variance on
      the IAT effect was conducted to determine if negative implicit bias was
      demonstrated toward Native people/mascots compared to Caucasian people/
      mascots. Pearson's zero-order correlation was used for the remaining hypotheses
      to examine the relationship between mascot IAT performance and race-biased
      behavioral outcomes.

Findings and Conclusions: Results indicated that participants elicited implicit stereotype
      bias toward Native American people and mascots compared to Caucasian people
      and mascots. In Study 2, Native mascot IAT performance was correlated with
      perceived partner enjoyment of completing nonacademic tasks. The present data
      support conceptualizing the Mascot IAT as a measure of stereotype bias providing
      evidence that implicit stereotype bias elicited on the Mascot IAT has predictive
      ability in determining instrumental (i.e., judgments, initial impression) behaviors
      toward Native Americans. Future studies should examine the extent to which
      these implicit biases are related to other forms of race-biased behaviors.

ADVISER'S APPROVAL: John M. Chaney, Ph.D.