

AN EXAMINATION OF IMPLICIT ATTITUDES
TOWARD NATIVE AMERICAN SPORTS MASCOTS

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CHAPTER I

INTRODUCTION

Recently sports mascots have drawn considerable attention and controversy. According to Pewewardy (1999), many schools and sports teams across the country use Native mascots and logos, and many institutions use inauthentic cultural representations of Native people. Although a number of educational institutions have changed from Native to non-Native mascots, such as Stanford, Marquette, Eastern Michigan, Miami of Ohio, and Dartmouth (Rodriguez, 1998), it is estimated that 88 colleges and 1,217 high schools continue to utilize these images (King, Staurowsky, Baca, Davis, & Pewewardy, 2002). Despite the insistence on the part of institutions that these images are positive representations honoring Native Americans, many Native Americans object to the use of these stereotypical and unflattering mascot images by athletic teams. As early as the 1970's, the American Indian Movement (AIM), along with other individuals and organizations, have desperately attempted to ban the use of Native American logos, nicknames, and mascots by universities and sports teams (Eitzen & Zinn, 2001).

Even though this has been an important issue to Native American groups (e.g., AIM, Society of Indian Psychologists) for nearly 30 years, only recently has it entered mainstream discourse. Indeed, numerous non-Native organizations (e.g., The United States Commission on Civil Rights, National Collegiate Athletic Association, American

Psychological Association) have issued resolutions calling for discontinuing the use of Native American mascots. In 2001, 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. Likewise, in 2005, the National Collegiate Athletic Association (NCAA) issued a similar statement prohibiting NCAA colleges and universities from using hostile or racist images at any championship event. Finally, the American Psychological Association (APA) recently released a council resolution recommending the retirement of all Native American mascots by schools, athletic teams, and institutions. The universal motive for these non-Native organizations' request to eliminate Native mascots is the shared perception that this practice represents a form of racial discrimination that negatively impacts Native people. However, despite all of this activity by both Native and non-Native groups, what most individuals know about the topic comes from high profile reports in the mainstream media.

Not surprisingly, the reports that receive the greatest amount of attention are also those that justify the continued use of Native mascots. One of the most widely publicized examples of this nature was the survey that appeared in the March 4, 2002 issue of *Sports Illustrated*. The article, "The Indian Wars" by S.L. Price, reported on the results of a poll taken on 351 Native Americans and 743 sports fans conducted by the Peter Harris Research Group. The results indicated that 83% of Native Americans surveyed actually supported the use of Native American mascots.

Interestingly, other polls investigating opinions concerning the mascot debate have provided opposite results. For example, Fenelon (1999) found that the majority of Native Americans greatly opposed the use of the Cleveland mascot Chief Wahoo,

whereas most Caucasian respondents favored preserving the mascot under all circumstances. Likewise, a survey conducted at the University of North Dakota indicated that only 39% of a group representing multiple minority students felt that the Fighting Sioux mascot honored the Sioux, and 61% of these minority students wanted the mascot to be changed (available at www.und.edu/namecommission/index.html).

Although a full discussion of the Sports Illustrated poll is beyond the scope of the present paper, the primary concerns revolve around the Peter Harris Research Group's unwillingness to reveal specifics of their survey methodology, despite numerous requests by investigators (King et al., 2002). Unfortunately, these survey results are cited as evidence supporting the contention that Native American mascots are positive symbols intended to honor Native American culture, 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) articulating the argument that Native American mascots are demeaning and racist. Along these lines, Strong (2004) has pointed out that, regardless of intent, the very existence of Native American mascots relegates Native Americans to an allegorical or symbolic form of cultural citizenship. Consequently, this perception of Native American culture is an obstacle preventing Native Americans from obtaining full participatory citizenship in society.

The only known empirical investigation examining the effects of stereotypical Native American symbols was conducted by Fryberg (2003). Although this study did not examine Native American sports mascots exclusively, it did provide data illustrating the impact of stereotypic Native American images. Specifically, in a series of experiments,

Native American and Caucasian college students were either exposed/not exposed to stereotypical Native images (i.e., Chief Wahoo, Pocahontas) and then completed measures of self-esteem, self-efficacy, and achievement expectancies. Native American participants exposed to these images demonstrated lower scores on all these measures compared to other Native Americans in the no-exposure control group. Interestingly, Caucasian participants demonstrated an increase in self-esteem following exposure to the Native images.

The results of Fryberg's (2003) study illustrate two important points. First, the use of stereotypical Native American images may result in a racially hostile environment that affects Native American students' self-esteem and achievement expectancy, as well as inhibiting Native Americans from enjoying the benefits of educational programs (Baca, 2004). Baca has pointed out that many Native Americans attend schools with Native American mascots, resulting in some parents and children finding these mascots offensive and degrading. This situation appears to violate Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race and color in any federally funded program (Baca; Trainor, 1995). Furthermore, The Department of Education's Office for Civil Rights has defined Title VI as prohibiting schools from creating or tolerating a racially hostile environment. Baca argues that the existence of Native American mascots in schools creates a hostile environment resulting in the humiliation and degradation of Native American students, and consequently, Native American students are denied full participation in the educational environment.

The second point of Fryberg's (2003) research is that stereotypical images of Native Americans, including mascots, increased Caucasian students' esteem. Fryberg

explains that stereotypical Native American images may serve to remind Caucasians of their higher status in society. Thus, for Caucasian students, Native mascots may be a reminder that Native Americans exist in a subordinate position below them, which in turn increases Caucasians' sense of status and power. Along these lines, Baca (2004) suggests that the use of Native American mascots provides a subtle message to Caucasian students, namely, that their culture is held in higher regard because it is not caricatured in stereotypical and unflattering ways. Thus, such a situation simultaneously perpetuates feelings of inferiority in Native American students, and reinforces the superior status of Caucasian students.

Not unlike other areas of research examining social cognition, investigating the mascot issue is beset with measurement issues. Indeed, the primary challenge to assessing prejudice or stereotypes of any kind is the tendency for individuals to minimize or deny potentially negative racial attitudes on self-report measures. It is important to point out that this manner of responding may not necessarily reflect an intentional effort to downplay unpopular attitudes, but may reflect the individual's genuine perception of him/herself as an egalitarian or non-racist person (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997). Dovidio (2001) has suggested that socially conditioned automatic attitudes (stereotypes) operate at a non-conscious level and may exist as subtle or implicit forms of racial prejudice. In other words, these implicit biases operate outside of awareness and are not accessible and, therefore, not measurable by traditional (i.e., self-report) methods (Dovidio, 2001). The difficulty of measuring unintentional or implicit attitudes has been addressed by new advances in methodology and technology, such as the Implicit Association Test (IAT) (Greenwald, McGhee, & Schwartz, 1998).

The Implicit Association Test is a computer task developed to measure implicit or automatic associations between certain stimuli (e.g., snakes) and evaluative attributes (e.g., dangerous) by examining response latencies (Greenwald et al., 1998). The IAT measures how quickly, and thus how closely, individuals relate certain stimuli with positive or negative attributes. The determination of implicit bias on the IAT (i.e., the IAT effect) is based on the assumption that the greater the learned association between two stimuli, the faster individuals process or make decisions about related concepts (Greenwald et al., 1998; Karpinski & Hilton, 2001). For example, response latencies for “snake-dangerous” word pairs would be shorter than “flower-dangerous” pairs because of the greater strength of the automatic association between “snake” and “dangerous.” Thus, conditioned responses are more automatic for “snake-dangerous” than for “flower-dangerous.” Racial attitudes are thought to operate in much the same way.

The IAT has successfully demonstrated Caucasian individuals’ implicit bias toward various minority groups, including Hispanic Americans and African Americans (e.g., Greenwald et al., 1998; Ottaway, Hayden, & Oakes, 2001). Greenwald et al. 1998 used the IAT to examine pleasant (e.g., happy, peace) and unpleasant (e.g., rotten, ugly) attitudes 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 latency times were significantly shorter for “Black-unpleasant” word pairings than “White-unpleasant” word pairings. Greenwald et al. interpreted the findings as evidence of an automatic negative bias toward African Americans. In other words, because a stronger positive association with Caucasian names was observed compared to

African American names, these data indicated a negative implicit bias toward African Americans.

The IAT has also been used to demonstrate implicit bias towards Native Americans. Following the methodology of Greenwald et al. (1998), Avendano et al. (2003) used the IAT in a sample of Caucasian college students to demonstrate a negative implicit bias toward Native Americans. Specifically, 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 positive (e.g., friendly, trustworthy) and negative (e.g., rude, untrustworthy) descriptors. Response latency times were significantly shorter for the “Native American-negative” word pairings compared to “European American-negative” word pairings. Consistent with the findings of Greenwald et al. (1998), Avendano et al. demonstrated a significant negative implicit bias towards Native Americans on the part of Caucasian college students.

Due to the lack of empirical data investigating the Native American mascot issue, the purpose of the present study was to examine potential negative implicit attitudes toward Native American mascots. Specifically, the IAT methodology used by Greenwald et al. (1998) and Avendano et al. (2003) was applied to an investigation examining implicit negative bias towards Native American mascots (e.g., Redskins, Braves, Fighting Sioux) compared to Caucasian mascots (e.g., Celtics, Pirates, Fighting Irish). Thus, the purpose of the current study was to demonstrate the utility of the IAT in the investigation of implicit attitudes toward Native American mascots.

The following chapter provides a more extensive review of the relevant literature on the IAT, with specific emphasis on empirical demonstrations of implicit racial

attitudes using the IAT. Finally, a study is introduced that examined the potential negative implicit attitudes associated with Native Americans mascots using the IAT. Consistent with Greenwald et al. (1998) and Avendano et al. (2003), it was anticipated that the results of the present study would demonstrate implicit negative attitudes on the part of Caucasian college students toward Native American mascots relative to Caucasian mascots.

CHAPTER II

REVIEW OF LITERATURE

The Implicit Association Test (IAT) has been used to examine a variety of constructs, including self-esteem and self-concept (e.g., Greenwald & Farnham, 2000), attitudes towards smoking (e.g., Huijding, de Jong, Wiers, & Verkooyen, 2005), religion (e.g., Rowatt & Franklin, 2004; Rowatt, Franklin, & Cotton, 2005), as well as anxiety (e.g., Egloff & Schukle, 2002) and psychopathology (e.g., Houwer, 2002). However, the IAT is rapidly becoming known as a common instrument for measuring implicit racial attitudes. For the purpose of the present paper, the literature review will focus mainly on the relevant empirical literature regarding the application of the IAT to racial attitudes.

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). The procedure begins with requiring participants to accurately sort target-concept stimulus words (e.g., tulips, spiders) into their corresponding categories displayed in either the upper right-hand (e.g., flowers) or left-hand (e.g., insects) side of the computer screen. This discrimination is accomplished by assigning one category (e.g., flowers) to a response by the right hand (using the “K” key) and the other (e.g., insects) to the left

hand (using the “D” key). To illustrate, if participants are presented with a flower stimulus word (e.g., tulip) in the center of the computer screen, they must assign it to the appropriate category (e.g., flower) using the assigned response key (e.g., “K” key). Subsequent discriminations are accomplished in a similar fashion.

In the second block of the procedure, attribute dimensions (e.g., pleasant versus unpleasant words) are similarly assigned to the same computer keys (e.g., “K” key for pleasant; “D” key for unpleasant); category labels appear in their respective corners on the computer screen. Participants are then required to sort evaluative attributes into the appropriate categories. For example, if the participant is presented with a pleasant stimulus word (e.g., happy) he/she must assign it to the correct category (e.g., pleasant).

After multiple practice trials with categorizing target-concept and attribute stimulus words, the categories are combined in the third block of trials (e.g., “flowers or pleasant” versus “insects or unpleasant”). Stimulus words for the target (e.g., tulip) and attribute (e.g., happy) categories are randomly presented and participants are required to sort them into the correct combined category. In the fourth block, concept categories are reversed. Thus, 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.

In the fifth block, these new combined categories are presented, reflecting the reversed response assignments (e.g., “insects or pleasant” versus “flowers or unpleasant”). It is the measure of the difference between stereotype compatible trial blocks and stereotype incompatible trial blocks that provides the measure of implicit bias toward target-concepts (flowers versus insects). Throughout the experiment, after any

incorrect response, a red “X” appears in the middle of the computer screen. Also, participants are given feedback on their performance after every trial-block that includes mean response latency in milliseconds and percentage correct.

Empirical Demonstrations of the IAT

One of the first empirical demonstrations of the IAT was conducted by Greenwald et al. (1998) in a series of three experiments. In Experiment 1, Greenwald et al. tested the capability of the IAT in detecting implicit attitudes towards common objects that are assumed to have inherent evaluative associations (e.g., positive versus negative) shared across individuals. In other words, participants were expected to have highly uniform evaluations of the categories chosen. Two of these target-concepts were assumed innately pleasant (flowers and musical instruments) and two unpleasant (insects and weapons). The experiment was designed so that participants completed two target-concept discriminations: (a) types of flowers (e.g., tulip, marigold, rose) compared to types of insects (e.g., bee, horsefly, wasp) and (b) types of musical instruments (e.g., flute, piano, violin) versus types of weapons (e.g., knife, gun, hatchet). These target-concepts were each used in combination with category labels in which participants discriminated pleasant stimulus word attributes (e.g., happy, family, peace) and unpleasant stimulus words (e.g., rotten, crash, ugly). It was anticipated that response latencies would be shorter for stereotype compatible pairings (flower + pleasant or instrument + pleasant) compared to stereotype incompatible pairings (insect + pleasant or weapon + pleasant).

Using 32 (13 male and 19 female) college students enrolled in introductory psychology courses at the University of Washington, participants were seated at a desk

with a computer in a small room. Participants received all instructions from a computer display prior to the beginning of the test and gave all responses to the stimulus items on the computer keyboard. Each participant completed two IAT procedures, one using flowers versus insects as the target-concept categories, and the second using musical instruments versus weapons. Both tasks included pleasant versus unpleasant stimulus words as evaluative attributes. Results revealed more positive attitudes toward flowers than insects and toward musical instruments than weapons. In other words, participants performed significantly faster when sorting stimulus words into stereotype compatible categories (flower + pleasant or instrument + pleasant) than stereotype incompatible categories (insect + pleasant or weapon + pleasant). Thus, participants demonstrated a stronger association for flower + pleasant and instrument + pleasant pairings relative to insects or weapons paired with positive attributes. It is also important to note that an order effect was observed. In other words, the IAT effect was larger when the stereotype compatible categories were presented first. This order confound was examined further in Experiments 2 and 3.

In Experiment 2 (Greenwald et al. 1998), the objective was to extend the methodology of the IAT beyond attitudes toward simple objects (e.g., flowers and insects) to more socially relevant areas of study. In this study, the IAT was used to examine attitudes held by Japanese Americans and Korean Americans towards each other. Based on the history of Japanese-Korean conflict, it was anticipated that individuals in their respective ethnic group would hold negative attitudes toward the out-group, as well as positive evaluations towards the in-group.

Participants were 17 self-identified Korean American and 15 Japanese American college students enrolled in introductory psychology courses at the University of Washington. The IAT measure included the same evaluative attributes as Experiment 1 (e.g., pleasant versus unpleasant words). In addition, 25 Korean (e.g., Youn) and 25 Japanese (e.g., Kawa) surnames served as target-concept categories. Also, because Japanese names are usually longer than Korean names, a set of 25 truncated Japanese names was generated from the 25 selected Japanese surnames, so that for each Korean name, there was a condensed Japanese name of the same length. The truncated Japanese names were used after participants had been exposed to several versions of the full-length names.

Participants performed two IAT tasks. The first IAT task required participants to categorize Korean names versus full-length Japanese names. In the second task, target-concepts consisted of Korean names versus truncated versions of the Japanese names. Experiment 2 also examined the order effects observed in Experiment 1 by assigning opposite response keys for the initial target-concept discrimination step of the task. For example, 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.

Results revealed that, as expected, Korean participants demonstrated stronger associations for stimulus words in the stereotype compatible condition (Korean names + pleasant words/Japanese names + unpleasant words) compared to the stereotype incompatible condition (Korean names + unpleasant words/Japanese names + pleasant words). In other words, Korean participants' response latency times were significantly

faster for the stereotype compatible pairings than stereotype incompatible pairings. Similar results were found for Japanese participants. Japanese participants responded significantly faster to stereotype compatible pairings (Japanese names + pleasant words/Korean names + unpleasant words) than to stereotype incompatible pairings (Japanese names + unpleasant words/ Korean names + pleasant words), revealing a negative bias toward Korean Americans relative to themselves. It was also demonstrated that the use of truncated Japanese names in place of full-length Japanese names had little effect on the results. Also, a weak order effect was observed similar to the one found in Experiment 1. Though nonsignificant, the IAT effect was slightly larger when one's own ethnicity + pleasant word pairings were performed first than when the other ethnicity + pleasant word pairings were performed first.

In Experiment 3 (Greenwald et al., 1998), the IAT was used to examine Caucasians' attitudinal evaluation of White versus African American names. Participants were 26 Caucasian college students enrolled in introductory psychology courses at the University of Washington. Pleasant and unpleasant words, similar to those used in Experiments 1 and 2, were used. In addition, Caucasian names (e.g., Brandon, Betsy) and African American names (e.g., Darnell, Latisha) used as target-concept stimuli were determined from a list pre-tested on introductory psychology students; target-concept names were those categorized by students as being typically Caucasian or African American. Replacing Korean and Japanese names with White and Black names, Experiment 3 followed the same methodology as Experiment 2.

Results from Experiment 3 revealed that response latency times were significantly shorter for stereotype compatible associations (White + pleasant, Black + unpleasant)

than for stereotype incompatible associations (White + unpleasant, Black + pleasant), indicating a stronger positive association for Caucasian names relative to African American names. There were no significant order effects, however, the weak effect indicated that the IAT effect is slightly larger when stereotype compatible pairings precede stereotype incompatible pairings. In general, results from the three experiments indicate that the IAT is useful in detecting automatic evaluative associations.

Using a similar methodology, Ottaway, Hayden, and Oakes (2001) conducted a study comparing evaluative associations for Hispanic names and Caucasian names. They were interested in examining the applicability of the IAT to other minority groups in our society. Participants were 33 Caucasian female undergraduates from Western Washington University. The target-concept stimulus words included Hispanic names (e.g., Josefina, Pedro) and Caucasian names (e.g., Dorothy, Barry) that were chosen based on four criteria: First, names had to be common among Hispanic and Caucasian groups, respectively. Second, names had to have an average familiarity rating on a 5 point scale (approximately 3 or “somewhat familiar”) previously administered to Caucasian undergraduate students. Third, names from each racial group were to have similar average frequencies in the U.S. Census database (i.e., name frequency was equal across racial categories). Finally, from the Caucasian names that met 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 in a similar manner, and 80% of pleasant and unpleasant words overlapped with those in Greenwald et al.

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

The methodology employed by Ottaway et al. (2001) differed slightly from Greenwald et al. (1998). First, on the combined category discrimination tasks (target-concept + attribute), target-concept stimulus words and evaluative attribute stimulus words appeared in random order rather than alternating order on every-other trial. Second, participants received performance feedback and average response latency feedback only upon completion of the task, rather than at the end of each block. Despite these differences in methodology, results mirrored the findings of Greenwald et al. with respect to the negative implicit bias demonstrated toward Hispanic names.

McConnell and Leibold (2001) explored the relationship of the IAT with intergroup social behavior and explicit reports of prejudice. Specifically, participants met with a Caucasian experimenter to complete questionnaires to assess racial attitudes and then completed a racially based IAT. Participants then had an unanticipated social interaction with an African American experimenter. These social interactions were videotaped and rated later by trained judges. Also, the Caucasian and African American experimenters independently rated the interaction during the course of the experiment to assess their impressions of participants' behavior toward African American and Caucasian experimenters. The primary prediction of their study was that participants

demonstrating more negative implicit attitudes toward African Americans on the IAT would also react more negatively with the African American experimenter.

Participants were 42 Caucasian undergraduates enrolled in introductory psychology courses at Michigan State University. They completed semantic differential scales for African Americans and Caucasians, and a feeling thermometer for African Americans and Caucasians. Participants also completed an IAT task using a total of 96 stimulus words: 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). For trial blocks 3 and 4 of the IAT, half of the participants were presented stereotype incompatible combinations (White + undesirable/Black + desirable), and trial blocks 6 and 7 comprised stereotype compatible combinations (White + desirable/ Black + undesirable). Stereotype compatible and incompatible presentations were reversed for the other participants and did not reveal any order effects.

Social interactions with Caucasian and African American experimenters were coded independently by trained judges according to general criteria: smiles, comfort level, laughter at experimenter's jokes, eye contact time, body lean toward experimenter, openness of participant's arms, facial expressions, speech errors and hesitations, fidgety body movements, and number of extemporaneous social comments made by the participant. Caucasian and African American experimenters also rated their own interactions using a 5-item inventory that followed similar criteria as the judges (e.g., friendliness, eye contact, abruptness or curtness, comfort level of participant, and comfort level of experimenter).

As predicted, results indicated that participants who revealed stronger negative attitudes towards African Americans on the IAT also exhibited more negative social interactions with an African American experimenter, as well as reported relatively more negative prejudicial attitudes toward African Americans on explicit measures (e.g., semantic differential). An important finding from this study was that IAT performance was related to measurable biases in inter-racial social interactions. Further, as demonstrated in previous studies, significant racial bias was exhibited on the IAT. Response latency times were significantly shorter for stereotype compatible pairings (White + desirable/Black + undesirable) than for stereotype incompatible pairings (White + undesirable/Black + desirable), indicating a stronger negative evaluation of African American names.

Avendano et al. (2003) recently examined the IAT's ability to detect implicit bias of Caucasians toward Native Americans. Participants were 35 Caucasian college students enrolled in introductory psychology courses at Oklahoma State University. 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., Navajo, Cherokee, Sioux) versus people of European American descent (e.g., Irish, English, Scottish). It was decided to use European American as the target-concept category label instead of Caucasian to provide for consistency in category names. These categories were used in combination with positive (e.g., friendly, trustworthy) and negative (e.g., rude, untrustworthy) evaluative attribute stimuli. It was predicted that participants would demonstrate stronger associations for stereotype compatible combinations (European

American + positive/Native American + negative) compared to stereotype incompatible combinations (European American + negative/Native American + positive).

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 stereotype compatible associations (European American + positive/Native American + negative) compared to stereotype incompatible associations (European American + negative/Native American + positive). Thus, Caucasian college students made stronger positive associations for words describing people of European American descent relative to words describing people of Native American descent, suggesting a negative implicit racial bias toward Native Americans.

Reliability and Validity of the IAT

As with any measure, the reliability and validity of the IAT has been questioned by numerous researchers. Cunningham, Preacher, and Banaji (2001) explored the consistency and stability of the IAT by measuring attitudes toward African Americans and Caucasians on four separate occasions every two weeks. Three measures that relatively examined implicit attitudes (IAT, response-window evaluative priming, and the response-window Implicit Association Test) were used. The IAT was shown to have .78 internal consistency, a .46 stability estimate, and a stability index of .68. Cunningham et al. (2001) concluded that the IAT was a relatively consistent measure that is quite stable across time. Additionally, Cunningham et al. examined the convergent validity of all three implicit measures. They found that the three implicit measures were significantly

correlated, therefore, they concluded that the IAT is shown to have convergent validity with other implicit measures.

Similarly, Gawronski (2002) tested the convergent and discriminant validity with two prejudice-related IAT's to explicit prejudice measures using a German student sample. The first IAT measured negative associations related to Turkish people, and the second IAT measured negative associations related to Asian people. It was found that the IAT's were significantly related to explicit endorsement of prejudiced beliefs about Turkish and Asian people. Furthermore, it was found that the Turkish IAT effect was unrelated to the explicit endorsement of prejudice toward Asian people, as well as the Asian IAT effect was unrelated to explicit prejudice toward Turkish people. Specifically in the domain of prejudice, Gawronski (2002) concluded that the results indicated clear evidence for convergent and discriminant validity of the IAT.

Additionally, Rudman, Greenwald, Mellot, and Schwartz (1999) explored the construct validity and generality of the IAT method with implicit prejudice in regards to religion (Jewish versus Christian), age (young versus old), and nationality (American versus Soviet). It was demonstrated that the IAT effectively assessed implicit prejudice across a wide range of social groups and domains. Also, Rudman et al. (1999) examined the effect of prior exposure to stimuli on the IAT effect. As discussed by Zajonc (1968), repeated exposure to certain stimuli may create positive associations due to the familiarity of the stimuli. In other words, prior exposure to certain stimulus words may skew the results of the IAT by causing the participants to respond positively to familiar stimuli. The results of Rudman et al. demonstrated that implicit prejudice was independent of familiarity with stimulus words in all three experiments. For example,

after manipulating the familiarity of target concepts under four conditions involving familiar and unfamiliar items, results showed implicit prejudice against Soviet versus American leaders in all conditions of the study, regardless of stimulus familiarity. Likewise, Ottaway et al. (2001) were also concerned with the effect of prior exposure of stimulus words on the IAT effect. Replicating Greenwald et al.'s (1998; Experiment 3) study on African American names versus Caucasian names, Ottaway et al. used specific criteria in choosing stimulus words to control for familiarity. After controlling for familiarity, they found that the results mirrored Greenwald et al.'s study in that implicit bias was demonstrated toward African American names in comparison to Caucasian names. Therefore, it was concluded that the IAT is a valid measure despite stimulus familiarity.

CHAPTER III

METHODOLOGY

The preceding review illustrates the utility of the Implicit Association Test (IAT) for examining implicit attitudes across a variety of target populations. Studies demonstrate both the ability of the IAT to detect implicit attitudes, and the social/ecological validity of these biases in predicting intergroup social interactions (e.g., McConnell & Leibold, 2001). Indeed, 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 bias toward a number of ethnic groups, the only known study that used the IAT to examine implicit biases toward Native Americans was conducted by Avendano et al. (2003). Results of that study indicated the existence of negatively biased implicit attitudes on the part of Caucasian college students.

The purpose of the present study was to extend the methodology used by Avendano et al. (2003) to examine the utility of the IAT in investigating implicit negative attitudes toward Native American mascots. Whereas Avendano et al. used target-concept stimuli that described people of either Native American descent (e.g., Cherokee) or European American descent (e.g., Irish), the present study examined implicit attitudes associated with familiar Native American mascots (e.g., Redskins) versus Caucasian

mascots (e.g., Celtics). Using the IAT, it was anticipated that Caucasian college students would demonstrate implicit negative attitudes toward Native American mascots relative to Caucasian mascots. Specifically, it was hypothesized that response latencies for stereotype compatible combined categories (Native Mascot + unpleasant or Caucasian Mascot + pleasant) would be significantly shorter than stereotype incompatible combinations (Native Mascot + pleasant or Caucasian Mascot + unpleasant).

METHOD

Participants and Procedure

Participants were 79 (22 male and 57 female) Caucasian undergraduate students recruited from introductory psychology courses at Oklahoma State University for a study involving a computerized word association task. This sample size exceeds the required number of participants ($n = 39$) needed to achieve adequate statistical power of .80 and to reject the null hypothesis with two-tailed $\alpha = .05$ (Greenwald, Nosek, & Banaji, 2003). Data for 102 participants was collected, however, 23 participants' data was not analyzed due to either missing data or if they identified themselves as a minority group member. Class credit was given for participation in this study. Participants ranged in age from 18 to 30 ($M = 19.8$, $SD = 2.23$). The majority of participants had a parent with a college degree (43%). Additionally, 27.8% of participants had a parent with a post-graduate degree, 21.5% had some college, and 7.6% completed high school.

The study took place in a research laboratory located at the university. All information was kept confidential by assigning participant numbers. Participants took part in individual 20-minute sessions led by an undergraduate or graduate research assistant. After reading and signing the consent form (Appendix A), participants

completed a demographic questionnaire. Participants then completed the computerized IAT task. The experimenter was not present in the room while participants completed the IAT. After completing the IAT, each participant was provided with a debriefing statement explaining the purpose of the study and providing information regarding counseling services that are available in the community.

Measures

Demographic Information Questionnaire. The demographic questionnaire (Appendix B) is an 8-item self-report measure that assesses participants' age, gender, ethnicity, and socioeconomic background.

Implicit Association Test (IAT). The IAT used in the present study was similar to the methodology used by Greenwald et al. (1998) and others (Avendano et al., 2003; McConnell & Leibold, 2001; Ottaway et al., 2001). Specifically, the present IAT examined the strength of association for stereotype compatible (Native Mascot + unpleasant/Caucasian Mascot + pleasant) and stereotype incompatible (Native Mascot + pleasant/Caucasian Mascot + unpleasant) target-concept/evaluative attribute combinations.

All instructions for completing the IAT procedure were provided on the computer screen. Once participants were seated at the computer, the experimenter exited the room.

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 IF 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 are either
‘PLEASANT’ or ‘UNPLEASANT’

In the other sorting task you will be classifying names 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 also 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, participants were reminded to “examine the next page carefully. It will tell you which keys to use for the next series of categorization trials.” Also, after each block of trials, participants were given performance feedback that included mean response latency in milliseconds and percentage correct.

In the first block of 36 trials, participants categorized six pleasant (e.g., love) and six unpleasant (e.g., rotten) evaluative words. The ‘Pleasant’ category label appeared on the upper-left side of the computer screen, and the ‘Unpleasant’ category label appeared on the upper-right side of the computer screen. Participants were required to assign the evaluative attributes to the appropriate category by pressing the ‘D’ key for Pleasant and the ‘K’ key for Unpleasant (see Appendix C).

For the second block of 36 trials, participants categorized target-concept words describing either Native Mascots or Caucasian Mascots. The ‘Native Mascot’ category

appeared on the upper-left side of the computer screen, and the ‘Caucasian Mascot’ category appeared on the upper-right side of the computer screen. Participants sorted target-concept stimulus words (e.g., Redskins, Celtics) into the correct category by using the ‘D’ key for Native Mascot and the ‘K’ key for Caucasian Mascot.

The third block of 36 trials consisted of participants sorting target-concept and attribute stimuli into stereotype compatible and stereotype incompatible combined categories. Half of the participants were presented with stereotype compatible pairings first; the other half saw stereotype incompatible categories first. Stereotype incompatible combined categories were labeled ‘Native Mascot or Pleasant’ and ‘Caucasian Mascot or Unpleasant’; stereotype compatible combined categories were labeled ‘Native Mascot or Unpleasant’ and ‘Caucasian Mascot or Pleasant.’ Stimulus words were sorted into the appropriate categories by using the ‘D’ key and the ‘K’ key, respectively. Following 36 practice trials, participants conducted the same task, however, they were told that this trial is now a test trial. Categories were located in the same place as the practice trial, and the key assignments did not change.

Following this test trial block, participants receive 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.

Specifically, the Native Mascot and Caucasian Mascot categories changed sides of the computer screen. For example, if the ‘Native Mascot or Pleasant’ label appeared first on the left and ‘Caucasian Mascot or Unpleasant’ appeared first on the right, the categories switch so that ‘Caucasian Mascot or Pleasant’ was on the left and ‘Native Mascot or

Unpleasant' was on the right. The evaluative attribute labels did not switch; the 'Pleasant' category remained on the left and 'Unpleasant' remained on the right throughout the procedure. Participants again sorted stimulus words into the appropriate category by pressing the 'D' key and 'K' key. Similar to the previous combined category block, the reversed combination sorting task involved 36 practice trials and 36 test trials.

Stimuli

Six pleasant words (love, beauty, pleasure, happy, relief, miracle) and six unpleasant words (poison, grief, hatred, rotten, hurt, tragedy) were selected from Greenwald et al. (1998). The initial list of six Native American and six Caucasian mascots were determined from an in-class survey of 100 (41 male, 59 female) introductory psychology students at the same university. This survey listed five mascot categories (Caucasian, Native American, Gentle Animal, Fierce Animal, and Occupations) and asked students to list as many mascots they could think of for each category. The six most frequently listed Native American mascots and the six most frequently listed Caucasian mascots on this survey were initially considered for inclusion as target-concept stimuli.

However, because the most frequently listed Caucasian mascot from this survey (*Fighting Irish*) contained two words, it was decided to replace *Seminoles* (number six on the original Native mascot list) with *Fighting Sioux* to provide consistency in the length of stimulus words (see Greenwald et al. 1998, Experiment 2). Also, the top Caucasian mascot listed on the original survey was *Cowboys*. Because this is the university mascot where the study took place, *Mountaineers* (number seven on the original Caucasian mascot list) was substituted to minimize the potential for a positive bias confound. The

final list of Native American mascots used as target stimuli consisted of: *Chiefs, Redskins, Indians, Warriors, Braves, Fighting Sioux*; the six Caucasian mascots were: *Celtics, Mountaineers, Pirates, Vikings, Rebels, Fighting Irish*.

Scoring the IAT

Greenwald et al. (2003) conducted an extensive examination of several scoring algorithms for the IAT. The improved scoring algorithm derived from this study offers several specific improvements contributing to construct integrity compared to existing scoring methods. Greenwald et al. demonstrated that the improved algorithm increases the power to observe association strengths by eliminating the influence of extraneous variables. Specifically, the new algorithm minimizes the response-speed artifact by excluding response times that are considered too fast or slow. Additionally, the improved scoring algorithm minimizes practice effects or prior IAT experience by including practice trial data in the analyses.

In the 2003 article, Greenwald et al. provide a scoring algorithm that a) uses all data from trial blocks (3, 4, 6, and 7); b) eliminates trials with latencies $> 10,000$ milliseconds, and eliminates participants for whom more than 10% of trials have latency times less than 300 milliseconds; c) computes mean latencies for correct trials in each block; d) computes one pooled standard deviation for all trials in block 3 (stereotype compatible practice trials) and block 6 (stereotype incompatible practice trials), and then another pooled standard deviation for all trials in block 4 (stereotype compatible test trials) and block 7 (stereotype incompatible test trials); e) replaces latencies for incorrect trials with the block mean + 600 milliseconds; f) averages the resulting values for each of the four trial blocks; g) computes two difference values, one for block 6 and block 3

(stereotype incompatible practice trials minus stereotype compatible practice trials), and one for block 7 and block 4 (stereotype incompatible test trials minus stereotype compatible test trials); h) divides each of the differences in step “g” by their respective pooled standard deviations; and i) averages the two quotients from previous step “h”.

The final step in the scoring algorithm (i) represents the average difference between stereotype incompatible pairings and stereotype compatible pairings and is reported as d , or the overall IAT effect. A positive d value, or IAT effect, indicates that response latencies for stereotype incompatible pairings were longer compared to stereotype compatible associations.

CHAPTER IV

FINDINGS

Results were consistent with the primary hypothesis of the study. Specifically, Caucasian participants demonstrated negative implicit attitudes toward Native American mascots relative to Caucasian mascots. 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 ($d = .16$, $\eta^2 = .30$), $F(1,77) = 33.354$, $p = .001$. The positive IAT effect indicated that mean response latencies for stereotype compatible target-attribute pairings [Native Mascot + unpleasant/Caucasian Mascot + pleasant] were significantly shorter than latencies for stereotype incompatible pairings [Native Mascot + pleasant/Caucasian Mascot + unpleasant], 960.13 ms and 1108.51 ms , respectively.

Exploratory analyses indicated no significant gender differences in the IAT effect, $F(1,77) = .019$, $p = .891$. Therefore, both men [$d = .18$, $F(1,20) = 14.67$, $p = .001$] and women [$d = .14$, $F(1,55) = 19.74$, $p = .001$] demonstrated significant negative implicit attitudes toward Native American mascots compared to Caucasian mascots.

CHAPTER V

CONCLUSION

Native American sports mascots have been the subject of intense debate in recent years, particularly in the popular media. Information emanating from high profile polls (e.g., Sports Illustrated, 2002) is used to support the contention that Native American mascots are positive symbols of Native American culture and are intended to honor Native American people. Except for surveys demonstrating opposition to Native American mascots (e.g., Fenelon, 1999; University of North Dakota, 2000), no empirical data exist regarding the Native mascot issue. Although there is some indication that stereotypical Native images have a negative impact on Native American's students' self-esteem (e.g., Fryberg, 2003), there is an absence of empirical data specifically related to the Native American mascot issue. However, data do exist that demonstrate negative attitudinal biases toward Native American people. Avendano et al. (2003) used the Implicit Association Test (IAT; Greenwald et al., 1998) to investigate implicit bias on the part of Caucasian college students toward Native Americans. Consistent with findings in similar studies examining implicit bias toward African Americans and Hispanic Americans (e.g., Greenwald et al., 1998; McConnell & Leibold, 2001; Ottaway et al., 2001), Avendano et al. demonstrated that Caucasians exhibit negative implicit biases toward Native Americans.

The present study utilized the IAT to examine potential implicit attitudes toward Native American mascots. Using the methodology of Avendano et al. (2003) and others (Greenwald et al., 1998; McConnell & Leibold, 2001; Ottaway et al., 2001), the current study investigated implicit attitudes associated with familiar Native American mascots (e.g., Redskins, Chiefs, Braves) compared to Caucasian mascots (e.g., Fighting Irish, Vikings, Pirates). Results were consistent with the primary hypothesis that Caucasian participants would demonstrate negative implicit attitudes toward Native American mascots relative to Caucasian mascots. Indeed, response times were significantly shorter for stereotype compatible associations (Native Mascot + unpleasant/Caucasian Mascot + pleasant) than stereotype incompatible associations (Native Mascot + pleasant/Caucasian Mascot + unpleasant). Therefore, despite claims by non-Natives that Native American mascots are honorable symbols and positive representations of Native people, the present data suggest otherwise. Results imply that Native American mascots are actually evaluated more negatively than Caucasian mascots, which then questions the argument that Native American mascots are viewed in a positive light.

Although the present data indicate that Caucasian individuals evaluate Native mascots negatively, alternative interpretations need to be addressed. For example, Brendl et al. (2001) described several possible explanations for significant IAT results, other than negative implicit attitudes. To illustrate, Brendl et al. demonstrated that the following groups of people in Greenwald et al.'s study (1998; Experiment 3) could produce identical IAT data indicating a negative prejudice against African Americans: Persons with (a) negative evaluations of African American names, (b) positive evaluations of Caucasian names without any evaluative association for African American

names, and (c) stronger positive evaluations of Caucasian than African American names without negative evaluations of either. Thus, Brendl et al. demonstrated that, indeed, negative bias does result in a significant IAT effect; however, a significant IAT effect does not necessarily indicate negative implicit bias.

Consistent with Brendl et al. (2001), several potential interpretations of the present data can be entertained in addition to negative implicit attitudes. Specifically, it could be argued that Caucasian participants merely demonstrated more positive evaluations of Caucasian mascots in the absence of any evaluation of Native American mascots. In other words, the IAT effect observed in the present study may have reflected neutral evaluations of Native American mascots, but more positive evaluations of Caucasian mascots. Similarly, it is possible that the findings indicate that both Caucasian and Native mascots were seen as positive; however, participants evaluated Caucasian mascots more favorably. Likewise, participants could have evaluated both types of mascots negatively, but they evaluated Native American mascots more negatively than Caucasian mascots. Thus, although the present data are consistent with an interpretation suggesting negative attitudinal bias toward Native mascots, it cannot be stated unequivocally that alternative explanations are not also equally plausible.

An examination of existing studies, however, suggests that regardless of absolute positive or negative evaluation of target groups, the relative difference in evaluation has important implications. For example, Avendano's (2006) IAT study examining attitudes toward Native and Caucasians Americans also included a self-report measure of views regarding affirmative action. Results indicated that Caucasian participants' negative implicit bias toward Native Americans (IAT effect) was significantly correlated with

their views on affirmative action. Specifically, Avendano demonstrated that the less favorable the evaluation of Native Americans relative to Caucasian Americans on the IAT, the greater the opposition to affirmative action. Thus, regardless of whether evaluations of target groups on the IAT are truly negative or just relatively negative compared to the other group, the evaluations appear to be related to socially meaningful outcomes (e.g., affirmative action).

Research has also shown that performance on the IAT is predictive of intergroup social interactions. For example, McConnell and Leibold 's (2001) results demonstrated that Caucasian participants who revealed stronger negative attitudes toward African American names on the IAT also exhibited more negative social interactions with an African American experimenter. Although social interactions were not assessed in the present study, previous studies indicate that, regardless of the absolute or relative nature of differences observed on the IAT, these differences are predictive of untoward behavioral transactions between racially dissimilar groups.

Whether the present data illustrate absolute or relative differences in evaluation, results demonstrated that Caucasian mascots were evaluated more favorably than Native American mascots. Given this, it may seem puzzling that universities and sports teams alike fight to retain their Native American mascot if Caucasian mascots are considered more favorable and, by extension, more preferable. One explanation is that sports mascots are chosen not on the basis of identification with Native American culture, but for the purpose of intimidation, which is the depiction that Native American mascots most often represent (Pewewardy, 1999). Moreover, it is common for mascots to be chosen for qualities of violence, competition, and force - all of which seem to symbolize

popular Native American mascots (King & Springwood, 2000). Because the majority of these mascots are used by non-Native institutions (King et al., 2002), it is unlikely that they are chosen because fans wish to identify with the totality of Native American culture. Instead, it is more likely that fans identify with the stereotypical depiction of Native Americans as intimidating savage characters. Paladino et al. (2002) have highlighted the manner in which dominant groups associate more sophisticated human characteristics with members of their ingroup and assign more primitive (infrahuman) traits to members of the subordinate outgroup. Thus, non-Native people may indeed be honoring what they believe to be true of Native people. However, they fail to recognize that this portrayal of Native people as savage creatures may perpetuate the view of Native Americans as primitive and less human.

As with most investigations, this study is not without methodological limitations. First, one of the most frequently mentioned concerns about the IAT mentioned in the literature is the potential that automatic associations measured by the IAT may not reflect negative outgroup bias, but rather participants' greater familiarity with ingroup stimulus items (Brendl et al., 2001; Dasgupta, McGhee, & Greenwald, 2000; Ottaway et al., 2001). This is consistent with previous findings demonstrating that frequent exposure to stimuli increases preference for those stimuli (Zajonc, 1968). In other words, recurring exposure to stimuli may lead to favorable evaluations of the stimuli purely as a function of familiarity.

Several studies have attempted to address the familiarity problem. Specifically, Ottaway et al. (2001) replicated Greenwald et al.'s (1998, Experiment 3) study, however, specific criteria were used for the African American and Caucasian names to control for

familiarity. Results were consistent with Greenwald et al. in that a negative implicit bias was found toward African American names compared to Caucasian names. Ottaway et al. concluded that the results were indeed due to implicit attitudes and not merely due to greater familiarity with Caucasian names. Likewise, Rudman et al. (1999; Experiment 3) manipulated the presentation of familiar and unfamiliar stimulus words describing American and Soviet leaders. Results revealed that an implicit bias toward Soviet leaders remained regardless of stimulus familiarity of stimulus items, and participants demonstrated greater liking toward unfamiliar American leaders than toward familiar Soviet leaders.

Familiarity was not directly controlled in the present study, and it could be that the data merely reflect familiarity with Caucasian mascots. It is possible that response times were faster for stereotype compatible associations (Caucasian mascot + pleasant/Native mascot + unpleasant) than stereotype incompatible associations (Caucasian mascot + unpleasant/Native mascot + pleasant) due to Caucasian participants being more familiar with Caucasian mascots than Native American mascots. Consequently, a more favorable or positive bias toward Caucasian mascots was observed compared to Native American mascots.

However, mascot stimuli for the present study were derived from a survey conducted at the same institution and used a similar college sample of introductory psychology students. The survey listed five mascot categories (Caucasian, Native American, Fierce Animal, Gentle Animal, and Occupations) and asked students to list as many mascots they could think of for each category. The most frequently listed Caucasian and Native American mascots were used as target stimuli in the present study.

It is unlikely that respondents would list mascots that were unfamiliar to them. Therefore, the likelihood that Native mascot stimuli used in this investigation were unfamiliar to the participants is minimized to a degree. Although possible, it is improbable that results reflect a positive association with Caucasian mascots due to familiarity when both Caucasian and Native American mascots were chosen based on this survey.

Another potential confound in the present study is that results could be due to Caucasian participants being personally offended by Native American mascots, and the IAT detected this negative reaction to the use of Native American mascots. In other words, it could be argued that the reason for response times being shorter for stereotype compatible word pairings (Native mascot + unpleasant/Caucasian + pleasant) compared to stereotype incompatible word pairings (Native mascot + pleasant/Caucasian + unpleasant) was that participants were genuinely offended by Native American mascots. These participants' negative attitudes toward Native mascots would be indistinguishable from participants whose negative responses were based on attitudinal biases. Indeed, unlike previous studies examining negative bias towards various minority groups using names or people of descent (e.g., Avendano et al., 2003; Greenwald et al., 1998; McConnell & Leibold, 2001; Ottaway et al., 2001), the present study examined implicit attitudes toward symbolic images or allegorical representations of a group of people. A certain level of abstraction was introduced in this study because attitudes toward an actual racial group were not being measured directly, but instead, attitudes toward a symbolic representation of a racial group were examined. Thus, it may be the case that participants in this particular sample were personally offended by the use of Native

American mascots, and that the observed results were due to negative attitudes associated with the mere use of these images as mascots.

Although it is easy to entertain this explanation, it is difficult to imagine that results of the present study were due to participants being offended by the use of Native American mascots. Logically, if this were the case, it would be expected that more opposition to the use of Native American mascots would be voiced by non-Native people in general. It is unlikely that our sample as a whole felt offended by the use of Native American mascots when there is such resistance to change these images by sports teams, schools, and universities. For instance, the University of Illinois and University of North Dakota maintain that using Native American mascots will be continued in the future, stating that their mascots are about university tradition and will be preserved (USA Today, 2005). In light of the backlash in the media toward discontinuing the use of Native American images and symbols as mascots (e.g, Sports Illustrated, 2002; USA Today, 2005), it is doubtful that results of the present study were in large measure due to participants' distaste of Native American mascots because they found them personally offensive. However, there is no way to determine whether the data merely reflect personal offense to Native mascots or genuinely negative attitudes toward them.

In summary, the present study is the only known empirical investigation of the Native American mascot issue. Results indicated a negative attitudinal bias toward Native American mascots compared to Caucasian mascots on the part of Caucasian participants. Findings suggest that Native American mascots may not be positive representations, as is often alleged. Although information from surveys is often used to support the continuation of Native American mascots, the present study demonstrated

that Native American mascots were more closely associated with negative evaluation relative to Caucasian mascots. Although the present data cannot determine whether the observed significant IAT effect represents an absolute negative evaluation of Native mascots or merely a relative negative evaluation compared to Caucasian mascots, (e.g., Brendl et al., 2001), previous studies have suggested that these differences have important implications regarding socially relevant issues and for inter-racial discourse (Avendano, 2006; McConnell & Leibold, 2001).

It was further speculated that Native American mascots may be chosen not for the purpose of identification with Native American culture, but because they conjure fierce and intimidating imagery - in much the same manner as ferocious animal mascots (e.g., Bears, Tigers) (Pewewardy, 1999). Future studies should examine the possibility that Native mascots are not merely considered less positively by Caucasian individuals, but whether Native mascots are associated with more primitive, infra-human (i.e., animal) traits compared to Caucasian mascots (cf. Paladino et al., 2002). Investigations of this nature could indicate that, despite good intentions behind the use of Native American mascots, their continued use potentially promotes a negative stereotypical portrayal of Native people as less than human.

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APPENDIX A
CONSENT FORM

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 Amanda L. Weaver or John M. Chaney 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 C. Jacobs, IRB Chair, 415 Winburn Hall (405-744-1676).

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.

APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE

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

APPENDIX C

IAT TABLE

Sequence of Trial Blocks in the Native American Mascot IAT

Block	Number of Trials	Function	Left-key assignment	Right-key assignment
1	36	Practice	Pleasant words	Unpleasant words
2	36	Practice	Native mascots	Caucasian mascots
3	36	Practice	Native mascots/Pleasant words	Caucasian mascots/Unpleasant words
4	36	Test	Native mascots/Pleasant words	Caucasian mascots/Unpleasant words
5	36	Practice	Caucasian mascots	Native mascots
6	36	Practice	Caucasian mascots/Pleasant words	Native mascots/Unpleasant words
7	36	Test	Caucasian mascots/Pleasant words	Native mascots/Unpleasant words

*** Remember: Half of the participants will be presented with the stereotype compatible pairings first; the other half will see stereotype incompatible categories first.**

APPENDIX D

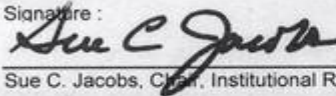
IRB APPROVAL PAGE

Oklahoma State University Institutional Review Board

Date	Monday, September 19, 2005	Protocol Expires:	9/18/2006
IRB Application No:	AS0421		
Proposal Title:	Implicit Attitudes of Caucasian College Students Toward Native American Sports Mascots		
Reviewed and Processed as:	Expedited Continuation		
Status Recommended by Reviewer(s):	Approved		
Principal Investigator(s) :			
Amanda L Weaver 1005 E. Brooke Ave. Stillwater, OK 74075	John M. Chaney 215 N. Murray 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 : 	Monday, September 19, 2005
Sue C. Jacobs, Chair, Institutional Review Board	Date

VITA

Amanda Lower Burke

Candidate for the Degree of

Master of Science

Thesis: AN EXAMINATION OF IMPLICIT ATTITUDES TOWARD NATIVE
AMERICAN SPORTS MASCOTS

Major Field: Clinical 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. Completed requirements for the Master of Science degree with
a major in Clinical Psychology at Oklahoma State University, Stillwater,
Oklahoma, in August 2006.

Experience: Undergraduate research assistant in 2002-2003; employed by
American Indians into Psychology for three summers, 2004-2006;
Teaching Assistant for two years, 2003-2004, 2005; Graduate Instructor
for two years, 2004-2006; Clinical practicum at the Psychological
Services Center and Cherokee Nation Behavioral Health Services, 2003-
2006; Graduate research assistant, 2003-present.

Professional Memberships: American Psychological Association, Southwestern
Psychological Association, American Indians into Psychology,
Association for Advancement of Behavior Therapy

Name: Amanda L. Burke

Date of Degree: July, 2006

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: AN EXAMINATION OF IMPLICIT ATTITUDES TOWARD
NATIVE AMERICAN SPORTS MASCOTS

Pages in Study: 48

Candidate for the Degree of Master of Science

Major Field: Clinical Psychology

Scope and Method of Study: The purpose of this study was to examine implicit biases toward Native American mascots. Participants in the study were 79 Caucasian students enrolled in introductory psychology courses at Oklahoma State University. Each participant individually completed a demographic questionnaire and the Implicit Association Test (IAT). A univariate analysis of variance on the IAT effect was conducted to determine if negative implicit bias was demonstrated toward Native American mascots compared to Caucasian mascots.

Findings and Conclusions: Results indicated that Caucasian participants elicited negative implicit bias toward Native American mascots compared to Caucasian mascots. Exploratory analyses indicated no significant gender differences in the IAT effect. Both men and women demonstrated significant negative implicit bias toward Native American mascots compared to Caucasian mascots. The present data cast some doubt on the argument that Native mascots are positive images intended to honor Native Americans. Future studies are needed to examine the extent to which these implicit negative attitudes may be associated with other social cognitive processes and forms of racial prejudice.

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