

Running head: IMPLICIT ATTITUDES AND BEHAVIOR

When Do Implicit Racial Attitudes Predict Behavior?

On The Moderating Role of Attributional Ambiguity

Michael J. Sargent and Ashley Theil

Bates College

Word Count: 4771

We would like to thank Michele Alexander, Marilynn Brewer, Kathy Low, and Bill von Hippel for comments on an earlier version of this paper. We also want to thank Joanne Miller for her helpful input on the experimental procedures—especially the suggestion of the sweatshirt. Please address all correspondence to the first author at 4 Andrews Road (Pettengill Hall), Bates College, Department of Psychology, Lewiston, ME 04240, or at [msargent@bates.edu](mailto:msargent@bates.edu). He may also be reached at (207) 786-6277 (phone) or (207) 786-8338 (FAX).

## Abstract

The purpose of the present study was to identify one condition under which controllable behavior toward an African-American could be predicted by implicit racial attitudes, as measured by the Implicit Association Test (IAT). White male participants were given a choice between working on a task with a Black partner or with a partner of unspecified race. Half the participants were given this choice under conditions of high attributional ambiguity and half were given the same choice under conditions of low attributional ambiguity. Later, participants completed the IAT. IAT scores indicating a preference for Whites over Blacks were associated with avoidance of the Black partner—but only under conditions of high attributional ambiguity. Measures of implicit stereotyping and explicit prejudice did not predict avoidance behavior under either condition.

Keywords: Attitudes, attributional ambiguity, automatic attitudes, IAT, implicit attitudes, implicit cognition, prejudice

## When Do Implicit Racial Attitudes Predict Behavior?

### On The Moderating Role of Attributional Ambiguity

When he referred to the attitude concept as “indispensable,” Allport (1935) made a bold claim about the utility of this construct. Since then, an important goal in documenting the usefulness of studying attitudes has been to demonstrate that they can predict behavior. Historically (LaPiere, 1934), and immediately before the infamous crisis of the field (Wicker, 1969), researchers have questioned how much attitudes can predict behavior. The current consensus is that there are indeed conditions under which attitudes can predict behavior. In shifting to a consideration of boundary conditions for the predictive validity of attitudes, social psychologists have moved from a question of main effects (“Do attitudes predict behavior?”) to a question of interactions (“When do attitudes predict behavior?”).

An example of an answer to the “when” question lies in the recent emphasis on attitude strength. Strong attitudes are more likely to predict behavior than weak attitudes (Krosnick & Petty, 1995). For example, attitudes are better predictors of behavior when they are relevant to issues in which individuals have a vested interest. Demonstrating this idea, Sivacek and Crano (1982) found that Michigan State University students of all ages were generally opposed to a proposal to raise the legal drinking age from 18 to 21. Nevertheless, attitude-consistent behavior (e.g., willingness to participate in an anti-referendum campaign) was more prevalent among students younger than 21—the ones who would be directly affected by the change. Another form of attitude strength is attitude accessibility. Attitudes that are more accessible—that can be retrieved with relative ease—are more predictive of subsequent behavior. Consistent with this reasoning, Fazio and Williams (1986) found that citizens’ attitudes toward presidential candidates were more predictive of their later voting behavior if they were more accessible.

### Implicit Attitudes

One thing common to both traditional work questioning the predictive validity of attitudes and recent work establishing the boundary conditions of that validity is a conceptualization of the attitude as an explicit, conscious evaluation. In the past few years, however, an alternative conceptualization has emerged. According to this line of thinking, evaluative processes can operate in an implicit fashion.

Implicit attitudes are assumed to be defined by at least two features: automatic activation and influence on behavior and judgment without the awareness of the actor (Greenwald, McGhee, & Schwartz, 1998). The first assumption reflects an understanding that evaluations can be activated without any intention or effort on the part of the evaluator (Bargh, Chaiken, Raymond, & Hymes, 1996). In other words, an individual's attitude toward a particular object may be activated upon merely encountering that object. Although there are conflicting perspectives regarding how general these automatic activation effects are (Bargh, Chaiken, Govender, & Pratto, 1992; Fazio, 1993), their basic existence is well supported. Greenwald et al.'s second assumption—that individuals' behavior may be influenced by particular attitudes without their awareness—is consistent with the general finding that individuals' introspective access to the true causes of their behavior is often lacking (Nisbett & Wilson, 1977).

Measurement. With the growing emphasis on implicit attitudes has come the problem of measuring them. Several attempts to resolve this problem have been proposed. For example, Fazio, Jackson, Dunton, and Williams (1995) used a priming paradigm to examine variation in the automatic activation of negative evaluations of Blacks. Fazio et al. found that White participants' response latencies to positive adjectives were longer after having been primed with Black faces than after White faces, but that the opposite was true with negative adjectives. Black

participants in the Fazio et al. study showed the opposite pattern—relative facilitation of responses to positive adjectives by Black primes, and of negative adjectives by White primes.

Partially on the basis of this overall difference between the responses of Black participants and White participants, Fazio et al. (1995) argued that this priming task might be useful as an unobtrusive measure of racial attitudes. In other words, one might expect to find this very pattern of differential responding by Blacks and Whites on a valid measure of racial attitudes. Additionally, they found that an individual difference measure based on this paradigm predicted Whites' interpersonal behavior toward a Black experimenter (who was blind to participants' scores on the automatic attitude measure). Whites whose automatic activation scores indicated more negative attitudes toward Blacks were rated as less friendly by the Black experimenter. This effect is consistent with later work showing that implicit attitudes predicted differential eye contact and blinking in interracial interactions (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997). It is even plausible that these nonverbal behaviors may have been one mechanism by which the Fazio et al. friendliness effect occurred.

In their discussion of this effect, Fazio et al. (1995) distinguished between responses that are relatively controllable versus those that are not. They emphasized this distinction as an important moderator of the impact of automatic evaluations on behavior. As they said, "Some such judgments and behavior may be more difficult to control fully than others. It is for such relatively uncontrollable classes of behavior that the effects of any automatically activated personal evaluations are likely to be most apparent" (p. 1020).

This is an appropriate qualification to Devine's (1989) model of prejudice. According to Devine, the factor that distinguishes high and low prejudice individuals from one another is not the automaticity of activation of negative stereotypes and evaluations of Blacks, but rather, it is

the motivation to control those beliefs and attitudes. Low prejudice individuals are presumed to act to prevent the influence of negative beliefs and attitudes on judgments of, and behavior toward, Blacks. Fazio et al. (1995) suggest that classes of behavior may differ in the degree to which they are subject to the actor's control. Behaviors that are least subject to one's control may be most subject to influence by implicit attitudes. If the nonverbal behaviors that communicate friendliness in social interactions (e.g., eye blinking) are not entirely within the control of the actor, those behaviors may be influenced by implicit attitudes.

The present work proceeds on the assumption that Fazio et al. (1995) are correct that controllability is an important moderator of the implicit attitude-behavior relation. Nevertheless, it is proposed that even when an actor is able to control a behavior, there may be situations in which he or she is no longer motivated to control the behavior.<sup>1</sup> In those situations, even controllable behaviors can be driven and predicted by implicit attitudes. One such de-motivating situation is when attributional ambiguity exists.

### Attributional Ambiguity

According to Jones and Davis's correspondent inference theory (1965), when there are multiple attributes that distinguish two alternatives—when there are multiple “noncommon effects”—discerning the motive of an actor who chooses one alternative over the other is difficult. Knowing that a new professor chose to accept an offer at Stanford rather than one from Yale gives little information about the motive behind the choice. Was the decision driven by a preference for warm weather, a desire for access to Pac-10 Conference athletics, or by any other factors that distinguish the two alternatives? One cannot be certain.

This ambiguity can also be interpreted in terms of Kelley's (1971) discounting principle. According to this principle, the existence of multiple plausible causes for the same event makes a

social perceiver less confident in any one of those causes than if it were the only plausible cause. So, the existence of multiple plausible explanations for the new professor's choice to work at Stanford undermines confidence in any single cause as representative of his or her motive.

Under either the Jones and Davis (1965) or the Kelley (1971) model, the presence of multiple plausible explanations for the choice renders the correct attribution for the choice ambiguous. In other words, a condition of high "attributional ambiguity" exists. In contrast, if Stanford and Yale differed on only one dimension, then low attributional ambiguity would exist, making it easier to determine the correct attribution.

Snyder, Kleck, Strenta, and Mentzer (1979) capitalized on this logic. They reasoned that individuals might be more likely to act on socially unacceptable motives under conditions of high attributional ambiguity, as opposed to low. To test this reasoning, Snyder et al. presented individuals with a choice between two seating areas, in either of which they could sit and watch a film next to a partner. In one area, the potential seating partner appeared to have a physical disability. The person in the other area did not. Snyder et al. found that participants who believed that different movies would be shown in the two seating areas were more likely to choose the non-disabled partner than participants who believed that the same movie would be showing in each area. Snyder et al. presumed that many participants were motivated to avoid sitting near the disabled person, but they deemed this avoidance motive socially unacceptable, and only acted on it when their choice could be attributed to a preference for one movie over another.

Situations that are high in attributional ambiguity, if they provide a socially acceptable attribution for behavior that might otherwise be interpreted as discriminatory, may lower individuals' motivation to control the presumed influence of prejudice on their responses. If they

can convince others—and perhaps themselves—that their response was driven by the socially acceptable motive, individuals may become less vigilant in their attempts to suppress negative attitudes—including implicit ones. Thus, implicit attitudes may guide their choice, even without their awareness, and even as they experience the choice as caused by a different, more acceptable motive.

To be clear, this framework should only apply to implicit attitudes that are deemed socially unacceptable. If an attitude is socially acceptable, then individuals should not be motivated to suppress its influence on behavior; the cloak of attributional ambiguity would be unnecessary.

Nevertheless, the class of implicit attitudes that are socially unacceptable includes many important attitudes, such as implicit racial attitudes. The present framework proposes that attributional ambiguity should moderate the relationship between these implicit attitudes and corresponding behavior—even controllable behavior. When attributional ambiguity is low, individuals will be vigilant in suppressing the effects of socially undesirable implicit attitudes. However, when attributional ambiguity is high, vigilance will be low, and implicit attitudes may guide behavior as a consequence.

## Method

### Overview

The present study was designed to test the prediction that attributional ambiguity would moderate the relationship between implicit racial attitudes and behavior. The Snyder et al. (1979) paradigm was modified to present a choice between sitting and working with a Black partner or a partner who was not Black. This choice was presented under conditions of high or low attributional ambiguity. Later, participants completed the Implicit Association Test (IAT)--



an implicit attitude measure (Greenwald et al., 1998)--as well as other predictor measures. An interaction was predicted, such that attributional ambiguity would moderate the relationship between IAT scores and behavior. Specifically, it was predicted that implicit preferences for Whites over Blacks (as indicated by the IAT) would be associated with avoidance of the Black partner, but only under conditions of high attributional ambiguity.

### Participants

Thirty-nine White male participants took part in this study. Participants were recruited primarily from introductory psychology classes, but others were recruited through face-to-face requests by the experimenter. Students in the psychology classes received credit toward a course requirement in exchange for their participation. All others were entered into a lottery for a cash prize.

### Materials

The Implicit Association Test was administered on computer. The two key blocks of trials were one consisting of evaluatively matched trials, and one consisting of evaluatively mismatched trials. On the block of matched trials, participants were instructed to tap the A key with a finger on their left hand if a word was a pleasant word or a White name and to tap the 5 key (on the numeric keypad) with a finger on their right hand if a word was an unpleasant word or a Black name. On the block of mismatched trials, participants were instructed to tap the A key for Black names and pleasant words, and to tap the 5 key for White names and unpleasant words.<sup>2</sup> On each trial, the program presented a word that fell into one of the four categories just listed, and recorded the response latency.

Each participant's mean latency on the block of matched trials and the mean latency on the block of mismatched trials were the bases of his IAT score.<sup>3</sup> A natural log transformation

was applied to each of these scores. Then the matched score was subtracted from the mismatched score. This difference score was each participant's IAT score. This scoring results in an index for which higher numbers indicate a tendency to be relatively slower in offering the same response to Black names and positive words (as well as the same response for White names and negative words) than the reverse. This tendency is treated as the indication of more positive implicit attitudes toward Whites than toward Blacks (i.e., an implicit preference for Whites over Blacks).

So that the predictive validity of implicit attitudes could be compared to that of other relevant constructs, this study also included measures of implicit stereotyping and explicit prejudice. The implicit stereotyping measure used was the stereotypic explanatory bias (SEB; Sekaquaptewa, Vargas, von Hippel, Espinoza, & Thompson, 1999; von Hippel, Sekaquaptewa, & Vargas, 1997). The bias itself is a tendency to be more likely to spontaneously explain counterstereotypic behaviors than stereotypic behaviors. In this task, participants are asked to generate sentence completions for sentence beginnings. Some of the sentence beginnings are stereotypic (e.g., Blacks performing stereotypically Black behaviors), and others are counterstereotypic (e.g., Whites performing stereotypically Black behaviors). Each completion is coded based on whether it explains the behavior in the sentence beginning or not. Each participant's score represents the extent to which he is more likely to explain counterstereotypic behaviors than stereotypic behaviors. In order to assess participants' explicit racial attitudes, the Modern Racism Scale (MRS; McConahay, Hardee, & Batts, 1981) was included as well. The coefficient alpha for the MRS was .83.

### Procedure

A White female experimenter greeted each participant upon his arrival and escorted him into a laboratory room. Upon entry to the lab, the experimenter stood to one side of the room, in order to provide the participant with an unobstructed view of the opposite end of the room, where two cubicle spaces were created by a partition. Each cubicle contained a table and two chairs. In each cubicle, personal belongings were left on one of the two chairs; the presence of the belongings was intended to imply that another person had chosen a seat in each cubicle and put his belongings there.

As dictated by the cover story, the experimenter stated that the purpose of the study was to understand “cognitive skills,” and in particular to examine the impact of individual performance on group performance. Each participant was told that he and a partner would work on an intellectual task together, but that he and the other participants in the session had been assigned to the experimental condition in which participants completed individual tasks before working together in pairs. Thus, each participant was told that he would be escorted to a room in which to work alone and that afterward he would return to the first room for group work. Further, the experimenter indicated that two other participants had already arrived and that they were each working alone in their own rooms.

Race of partner. In order to vary the race of the potential partners, aspects of the clothing on the chairs were strategically varied. One set of clothing was intended to imply that its owner was African-American. This set of clothing consisted of a white sweatshirt, on which a color photo of a Black family was printed. Surrounding the photo was the text, “Jackson Family Reunion ’99.”<sup>4</sup> The other set of clothing was meant to imply no race in particular, and it consisted merely of a plain, blue jacket.

To reinforce the effectiveness of the race ruse, the experimenter referred to the two other (implied) participants by names, one of which was stereotypically Black. She said, “As you can see, a couple of other participants are already here. Jamal and Christopher are set up in their rooms and they are working on the individual tasks now.”

Attributional Ambiguity Manipulation. Two experimental conditions were created to manipulate attributional ambiguity. In both conditions, participants were told that after all participants had completed the individual phase of the experiment, they would return to the room and join their partner on an intellectual task. The low attributional ambiguity condition was the “same task” condition. Participants in this condition were told that partners in both cubicles would work on crossword puzzles together. Identical crossword puzzle books were clearly visible, one on each table.

The high attributional ambiguity condition was the “different task” condition. Participants in this condition were told that the partners in the cubicle on the left would work on a different task from the partners in the cubicle on the right. Consistent with this statement, a crossword puzzle book was visible on the table in one cubicle, while a word find puzzle book was visible on the table in the other cubicle. Counterbalancing ensured that each of the different tasks was paired with the Black partner’s sweatshirt half the time within the different task condition; this rules out actual differences in desirability of the tasks as an alternative explanation for race effects.

Choice Behavior. After the experimenter completed the description of the study, she handed a consent form to the participant. He was asked to take a seat in the cubicle in which he wanted to work later, and to complete his consent form there. The experimenter observed where he sat and recorded that information, unbeknownst to him.

Collection of Individual Difference Data. After the participant left his personal belongings in his chair in the first room, the experimenter escorted him down a hallway to a private room where he was to work individually. Along the way, two signs were posted that read, “Testing in Progress: Do Not Disturb.” These signs were posted on two different doors in order to reinforce the suggestion that there were two other participants already at work.

After being led into his room, the participant took a seat in front of a computer. The experimenter explained that he would complete several individual tasks that “assessed different cognitive skills.” The IAT was presented as a task involving the skill of “categorization.” The SEB was presented as a task involving the skill of “elaboration.” The MRS was presented as part of a survey designed to assess the processes involved in “evaluation.” At the end of the MRS was a demographic questionnaire.

Each participant was left alone in the room to complete the SEB, IAT, and MRS (in that order). Upon completion, he opened the door to signal that he was finished. At that point, the experimenter explained that the study was actually over, probed for suspicion, and debriefed him.

## Results

### Removal of Participants from the Sample

Prior to analysis, one participant was dropped because his error rate on one block of IAT trials exceeded 25% (a cutoff suggested in the instructions for use of the IAT). This deletion left a sample of 38 participants.

### Seating Choice

Of the 38 participants, 50% chose to sit in the cubicle with the Black partner. Additional analyses examined the relationship between the individual difference variables and choice behavior, within both experimental conditions.

The IAT and Attributional Ambiguity. Participants' error rates on the IAT were generally low, and they were also similar to those reported by Greenwald et al. (1998, Experiment 1). Whereas Greenwald et al. reported an error rate of just under 5%, the mean error rate in the present data was just under 6%. Also, the error rate tended to be higher on evaluatively mismatched trials (similar to what Greenwald et al. reported), but not significantly so,  $F(1, 37) = 1.44, p = .24$ .

Greenwald et al.'s (1998) basic IAT effect was also replicated. Participants' response latencies on the evaluatively mismatched trials ( $M = 1067.13\text{ms}$ ) were longer than their latencies on the matched trials ( $M = 782.21\text{ms}$ ),  $F(1, 37) = 108.53, p < .01$ .

In order to determine if individuals' IAT scores could predict their seating choice, and in order to determine if this relationship depended on experimental condition, logistic regression analysis was employed. Logistic regression was chosen because of the dichotomous nature of the dependent variable (Menard, 1995).<sup>5</sup> The logistic regression model included a dummy variable for condition, each person's IAT score, and the interaction between the two variables. The chi-square test of model fit indicated that the information provided by these independent variables allowed better prediction of the dependent variable than could be accomplished without them,  $\chi^2(3, N = 38) = 9.57, p < .05$ .

As the first equation in Table 1 indicates, the predicted interaction between IAT score and condition was significant,  $p < .05$ . To probe the form of the interaction, the regression

coefficient for the IAT effect was tested separately for individuals in each condition. Among participants in the same task condition, the IAT was not a significant predictor of seating choice,  $B = 6.84$ ,  $p = .11$ , although there was a non-significant trend suggesting that IAT scores indicating an implicit preference for Whites were associated with greater likelihood to choose the Black partner. Among participants in the different task condition, the IAT was a significant predictor of seating choice,  $B = -8.26$ ,  $p < .05$ . The negative sign of the coefficient indicates that higher IAT scores—those indicating an implicit preference for Whites over Blacks—were associated with lower predicted probabilities of choosing the Black partner, as expected. In other words, implicit preferences for Whites predicted greater avoidance of the Black partner, but only in the high attributional ambiguity condition.

The previous analysis preserved the continuous nature of the IAT variable (so as to maximize power). However, for purposes of displaying the data, the sample was split at the median on IAT. Table 2 presents the proportion of participants sitting with the Black partner, as a function of experimental condition and position relative to the median. The table illustrates the pattern just described; IAT scores indicating implicit preferences for Whites were associated with lower likelihood of sitting with the Black partner, but only when attributional ambiguity was high.

SEB and MRS. As the second two equations of Table 1 indicate, neither the SEB nor the MRS was a significant predictor of seating choice. There was neither a main effect nor an interaction involving either of these variables, all  $p$ 's  $> .10$ . Also, neither the logistic regression model testing the effects of the SEB nor the model for the MRS accounted for the data well,  $\chi^2$  (3,  $N = 38$ ) = 0.11,  $p = .99$ , and  $\chi^2$  (3,  $N = 36$ ) = 1.59,  $p = .66$ , respectively.

### Correlations Among Predictor Variables

In order to assess the relationships among the predictors, their intercorrelations were examined. The IAT was not related to either the MRS,  $r = .01$ ,  $p = .95$ , or the SEB,  $r = .01$ ,  $p = .96$ . Also, the SEB and MRS were not significantly correlated with each other,  $r = .03$ ,  $p = .85$ .

### Discussion

We predicted that attributional ambiguity would moderate the relationship between implicit racial attitudes and behavior toward a Black target. Specifically, we expected that implicit attitude scores indicating a preference for Whites over Blacks would be associated with avoidance of a Black partner—but only under conditions of attributional ambiguity. The present data confirm this prediction.

Although there was a general tendency for participants to respond more slowly on the evaluatively mismatched trials (as in Greenwald et al., 1998), there were individual differences in the magnitude of this effect, and thus, there was variance in IAT scores. The significance and form of the interaction between IAT score and experimental condition are entirely consistent with expectations. White participants whose IAT scores indicated a relative preference for Whites over Blacks were less likely to choose the Black partner than participants whose scores indicated no such preference, but only under conditions of attributional ambiguity. When they believed their choice was not attributable to task preference—in the same task condition—participants' behavior did not correspond with their implicit attitudes. In fact, if anything, there was a trend indicating that individuals with implicit preferences for Whites bent over backwards to appear non-prejudiced, by choosing to sit with the Black. This particular trend, while interesting, should be viewed cautiously, though, as it was not statistically significant. On the other hand, when they believed their choice could be attributed to task preference—in the



different task condition—participants' behavior did correspond with their implicit attitudes. Thus, the present study suggests one condition under which implicit racial attitudes may guide behavior. Whereas Fazio et al. (1995) emphasized the controllability of behavior as an important moderator of the implicit attitude-behavior relation, the present results indicate that even when behavior is controllable, attributional ambiguity may still moderate the impact of implicit attitudes. More generally, situations that lower individuals' motivation to control their prejudices may be the situations in which even controllable behaviors are influenced by implicit attitudes.

One issue that the present data do not resolve is whether individuals are motivated by self-presentational concerns or by self-evaluative concerns (or both). It is plausible that the "cloak" of attributional ambiguity serves to prevent others from concluding that one is prejudiced. However, it is equally plausible that attributional ambiguity serves to protect one's own self-image as an egalitarian person, as would be suggested by the theory of aversive racism (Gaertner & Dovidio, 1986). Future studies may shed some light on this question, perhaps by manipulating the public or private nature of the criterion behavior.

In contrast to the IAT, the additional measures included in this study did not predict behavior. Consistent with other studies (Dovidio et al., 1997; Fazio et al., 1995) there was no relationship between the Modern Racism Scale and behavior toward a Black target. Also, the SEB did not predict behavior (on the other hand, see Sekaquaptewa et al., 1999, for data indicating that it can predict friendliness toward a Black person). Thus, certain interracial behaviors may not be well predicted by measures of explicit prejudice or implicit stereotyping. Future studies should determine the conditions under which these constructs can indeed predict behavior.

These results are consistent with previous work (Dovidio et al., 1997, Studies 1 & 3; Fazio et al., 1995; Greenwald et al., 1998), in that they indicate no significant relationship between implicit and explicit measures of racial attitudes. Nevertheless, other studies have found relationships between the two (Dovidio et al., 1997, Study 2; Wittenbrink, Judd, & Park, 1997). Clearly, one goal of future research will be to resolve these conflicting results. Perhaps, as more research accumulates in which implicit and explicit measures of racial attitudes are included, meta-analytic techniques can bring some clarity to this issue.

At any rate, the present results indicate that implicit racial attitudes may predict behavior, provided that the behavior can be attributed to a socially acceptable motive. This finding has potential practical implications. In organizational settings, for instance, Black and White job applicants probably differ on a number of dimensions apart from race (e.g., relevant experience). If these other factors make hiring decisions attributionally ambiguous, the door may be opened for the impact of implicit racial attitudes—perhaps even without the awareness of the individuals who make those choices. Thus, implicit attitudes may affect behavior—even deliberate, controlled behavior—under the right conditions. Attributional ambiguity appears to constitute one such condition. Searching for other conditions may inform our understanding of the impact of implicit attitudes, in much the same way that a conditional approach enriched our understanding of explicit attitudes.

## References

- Allport, G. W. (1935). Attitudes. In C. Murchison (Ed.), Handbook of social psychology (pp. 798-884). Worcester, MA: Clark University Press.
- Bargh, J. A., Chaiken, S., Govender, R., & Pratto, F. (1992). The generality of the automatic attitude activation effect. Journal of Personality and Social Psychology, 62, 893-912.
- Bargh, J. A., Chaiken, S., Raymond, P., & Hymes, C. (1996). The automatic evaluation effect: Unconditional automatic attitude activation with a pronunciation task. Journal of Experimental Social Psychology, 32, 104-128.
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. Journal of Personality and Social Psychology, 56, 5-18.
- Dovidio, J. F., Kawakami, K., Johnson, C., Johnson, B., & Howard, A. (1997). On the nature of prejudice: Automatic and controlled processes. Journal of Experimental Social Psychology, 33, 510-540.
- Dunton, B. C., & Fazio, R. H. (1997). An individual difference measure of motivation to control prejudiced reactions. Personality and Social Psychology Bulletin, 23, 316-326.
- Fazio, R. H. (1993). Variability in the likelihood of automatic attitude activation: Data re-analysis and commentary on Bargh, Chaiken, Govender, & Pratto (1992). Journal of Personality and Social Psychology, 64, 753-758.
- Fazio, R. H., Jackson, J. R., Dunton, B. C., & Williams, C. J. (1995). Variability in automatic activation as an unobtrusive measure of racial attitudes: A bona fide pipeline? Journal of Personality and Social Psychology, 69, 1013-1027.

Fazio, R. H., & Williams, C. J. (1986). Attitude accessibility as a moderator of the attitude-perception and attitude-behavior relations: An investigation of the 1984 presidential election. Journal of Personality and Social Psychology, *51*, 505-514.

Gaertner, S. L., & Dovidio, J. F. (1986). The aversive form of racism. In J. Dovidio & S. Gaertner (Eds.), Prejudice, discrimination, and racism (pp. 61-89). Orlando, FL: Academic Press.

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

Jones, E. E., & Davis, K. E. (1965). From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), Advances in experimental social psychology: Vol. 2. (pp. 219-266). New York: Academic Press.

Kelley, H. H. (1971). Attribution in social interaction. Morristown, NJ: General Learning Press.

Krosnick, J. A., & Petty, R. E. (1995). Attitude strength: An overview. In R. Petty & J. Krosnick (Eds.), Attitude strength: Antecedents and consequences (pp. 1-24). Mahwah, NJ: Lawrence Erlbaum.

LaPiere, R. (1934). Attitudes versus actions. Social Forces, *13*, 230-237.

McConahay, J. B., Hardee, B. B., & Batts, V. (1981). Has racism declined in America? It depends on who is asking and what is asked. Journal of Conflict Resolution, *25*, 563-579.

Menard, S. (1995). Applied logistic regression analysis. Thousand Oaks, CA: Sage.

Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. Psychological Review, *84*, 231-259.

Sekaquaptewa, D., Vargas, P., von Hippel, W., Espinoza, P., & Thompson, M. (1999). Biased information processing as a predictor of discrimination. Manuscript submitted for publication.

Sivacek, J., & Crano, W. D. (1982). Vested interest as a moderator of attitude-behavior consistency. Journal of Personality and Social Psychology, 43, 210-221.

Snyder, M. L., Kleck, R. E., Strenta, A., & Mentzer, S. J. (1979). Avoidance of the handicapped: An attributional ambiguity analysis. Journal of Personality and Social Psychology, 37, 2297-2306.

von Hippel, W., Sekaquaptewa, D., & Vargas, P. (1997). The linguistic intergroup bias as an implicit indicator of prejudice. Journal of Experimental Social Psychology, 33, 490-509.

Wicker, A. W. (1969). Attitudes versus actions: The relationship of verbal and overt behavioral responses to attitude objects. Journal of Social Issues, 25, 41-78.

Wittenbrink, B., Judd, C. M., & Park, B. (1997). Evidence for racial prejudice at the implicit level and its relationship with questionnaire measures. Journal of Personality and Social Psychology, 72, 262-274.

## Footnotes

<sup>1</sup>Dunton and Fazio (1997) have shown that individuals differ in their chronic motivation to control their implicit attitudes. This paper explores the possibility that situations differ in how much they motivate individuals to control their implicit attitudes.

<sup>2</sup>Black and White names as well as pleasant and unpleasant words were selected from those used by Greenwald et al. (1998).

<sup>3</sup>As in Greenwald et al., the first two trials of each block were dropped. Also, latencies below 300ms or above 3,000ms were recoded as 300ms or 3,000ms, respectively.

<sup>4</sup>Pretest participants were asked what race, if any, might be inferred from this sweatshirt. They all reported that college students would assume its owner was Black.

<sup>5</sup>In fact, linear regression analyses yielded nearly identical results in this case. If anything, the effects were slightly stronger in linear regression, so we are being conservative in reporting the logistic regression results.

Table 1

Summary of Logistic Regression Analyses Predicting Seating Choice

	Equation 1		Equation 2		Equation 3	
Variable	<u>B</u>	<u>SE</u>	<u>B</u>	<u>SE</u>	<u>B</u>	<u>SE</u>
Condition	0.24	0.81	0.26	0.68	0.22	0.66
IAT	-8.26	4.06*				
IAT x Condition	15.10	5.94*				
MRS			0.22	0.55		
MRS x Condition			-0.85	0.80		
SEB					0.03	0.38
SEB x Condition					-0.04	0.54
Constant	-0.54	0.58	-0.11	0.49	-0.11	0.47

\*  $p < .05$

Table 2

Proportion of Participants Sitting With The Black Partner, by Condition and IAT Grouping  
(Above or Below Median)

Condition	IAT Score	
	Below Median	Above Median
Low Attributional Ambiguity	0.43	0.58
High Attributional Ambiguity	0.67	0.14

Note. The IAT was scored so that higher scores indicate an implicit preference for Whites, rather than Blacks. It should also be noted that this table is included solely for illustrative purposes. The logistic regression analysis did not rely on a median split, as this would have been a less powerful analysis. Instead, the continuous nature of the IAT variable was preserved.