

RESEARCH REPORTS

Employment Discrimination: The Role of Implicit Attitudes, Motivation, and a Climate for Racial Bias

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This study is an attempt to replicate and extend research on employment discrimination by A. P. Brief and colleagues (A. P. Brief, J. Dietz, R. R. Cohen, S. D. Pugh, & J. B. Vaslow, 2000). More specifically, the authors attempted (a) to constructively replicate the prior finding that an explicit measure of modern racism would interact with a corporate climate for racial bias to predict discrimination in a hiring context and (b) to extend this finding through the measurement of implicit racist attitudes and motivation to control prejudice. Although the authors were unable to replicate the earlier interaction, they did illustrate that implicit racist attitudes interacted with a climate for racial bias to predict discrimination. Further, results partially illustrate that motivation to control prejudice moderates the relationship between explicit and implicit attitudes. Taken together, the findings illustrate the differences between implicit and explicit racial attitudes in predicting discriminatory behavior.

Keywords: discrimination, implicit attitudes, racism, prejudice, IAT

In recent years, racist attitudes have evolved from being blatant and hostile in nature to being more subtle and ambivalent (Brief, Dietz, Cohen, Pugh, & Vaslow, 2000). Indeed, whereas traditional self-report measures have indicated that there has been a decline in racist attitudes, discrimination continues in employment decisions (Maass, Castelli, & Arcuri, 2000). This discrepancy and shift in the nature of racist attitudes has prompted social scientists to design new measures that are consistent with the more modern expression of racism (McConahay, 1986; McConahay, Hardee, & Batts, 1981). These scales attempt to get around self-presentation bias and identify individuals with negative racial attitudes by using questions in which the prejudiced response could be attributed to “racially neutral ideology” (Fazio, Jackson, Dunton, & Williams, 1995).

Recently, some researchers have moved away from these self-report measures to physiological, response latency, or priming measures to assess an individual’s level of racist attitudes (Fazio & Olson, 2003). These more implicit measures are believed to be less susceptible to self-presentation biases and thus are more successful at assessing prejudices. Although research has documented that these implicit measures correlate with other attitudes and predict microlevel behavior, there is currently little evidence indicating

that such implicit attitudes are useful for predicting more macrolevel behavior, such as discriminatory hiring decisions.

The present study was designed to be a constructive replication of the Brief et al. (2000) study, which showed that modern racists act on their prejudices in particular social climates. Lykken (1968) defined a constructive replication as a study that not only tests the validity of prior findings but also tests new hypotheses. The present study extends the Brief et al. (2000) study in several ways. First, in addition to assessing modern racism, we included a measure of more traditional racist beliefs (i.e., old-fashioned or hostile racism) to ascertain whether these more modern racism assessments were really needed to identify racist individuals. Second, in addition to using these two self-report (i.e., explicit) measures of racism, we included an implicit racial attitudes measure. Third, we included a measure of motivation to control prejudice to test whether it is indeed a self-presentation bias that accounts for different results obtained by explicit and implicit measures. Finally, we used a more sensitive measure of racial discrimination to test our hypotheses by comparing differences in the ratings of Blacks and Whites with a more sophisticated statistical technique: hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992; Kreft & De Leeuw, 1998). Taken together, these additions allowed us to test new hypotheses that provide a greater understanding of employment discrimination. In summary, the present study merged the literatures on racist attitudes and their measurement, self-presentation bias, and organizational social norms and climates to understand the differential utility of implicit and explicit measures in predicting individuals’ behavior in a selection context.

Employment Discrimination and Racist Attitudes

Many studies have looked at the relationship between race considerations and employment discrimination (Roberson &

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We thank Brent Smith and Susan Taylor for their comments on drafts of this article. An earlier version of this article was presented at the 17th Annual Conference of the Society for Industrial and Organizational Psychology, April 2002, Toronto, Ontario, Canada.

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Block, 2001). In the present study, we adopted the disparate treatment definition of employment discrimination; disparate treatment occurs when different standards are applied to different groups (Gatewood & Field, 2000). Several meta-analyses have been conducted to identify the factors that impact the magnitude and direction of these differential standards. For example, meta-analyses by Ford, Kraiger, and Schechtman (1986) and Roth, Huffcutt, and Bobko (2003) have found that Blacks received lower scores and evaluations on both objective and subjective measures. In addition, Kraiger and Ford (1985) found that both Black and White raters gave higher ratings to members of their own race. These results provide evidence that individuals apply differential standards when evaluating applicants. Indeed, Roth et al. (2003) have called for future research to identify the biases that contribute to these racial differences in performance.

Of course, mean differences between Black and White applicants on some measurement instrument do not necessarily imply bias. It is possible that the mean differences reflect true differences between groups (Oppler, Campbell, Pulakos, & Borman, 1992). To address this possibility, Oppler et al. (1992) controlled for a number of job relevant variables and found that although the differences between Blacks and Whites diminished, they did not disappear. Recognizing the fact that it is unlikely that the authors included all of the relevant variables that might explain these differences, the Oppler et al. study does provide indirect evidence that racial attitudes might be a contributing factor to the average rating differences for Blacks and Whites.

A series of studies by Brief et al. (2000) provides more direct evidence for the role of racial attitudes. In the second study reported in the Brief et al. (2000) article, participants completed the Modern Racism Scale (MRS; McConahay et al., 1981) as well as an in-basket exercise. Among the many in-basket items was a selection decision task that asked the participants to rate potential job applicants. In the in-basket background material, participants in one condition received a memo from the simulated organization's president that contained a statement expressing his desire for the candidate hired to be White. Another condition received a memo from the president, but it did not contain the statement concerning racial preferences. Although Brief et al. did not discuss this "social-norm" manipulation as creating an organizational climate for racial bias or equality, their manipulation is consistent with the conceptualization of climate proposed by Schneider (1972). Schneider indicated that organizational climate is a function of what is rewarded, supported, and expected in the organization and sends strong signals to employees and others about what behavior is socially acceptable.

As expected, Brief et al. (2000) found that the average rating of Black applicants was lower in the climate for racial bias condition (when the president was perceived as a legitimate authority and indicated his White racial preference). More important, they found that scores on the MRS moderated this relationship in that modern racists gave Black applicants lower ratings in the climate for racial bias condition. Thus, it appears that modern racists act on their beliefs but only when the social norms appear to legitimize discrimination. However, before accepting this interpretation, it is important to note that Brief et al. (2000) operationalized biased ratings as a significant difference in the average evaluation of Black applicants across the two climate conditions. In other words, they did not assess what happened to the ratings of White appli-

cants across the two climate conditions. It is possible that the biased climate condition universally decreased the ratings of all applicants, regardless of their race. Thus, in the present study, we attempt to replicate this effect for organizational climate through the use of a slightly more sensitive measure of discrimination through comparisons of the differential rating of Black and White applicants across the two climate conditions:

Hypothesis 1 (H1): Organizational climate will influence applicant ratings. In particular, Black applicants will have lower ratings compared with White applicants in the "climate for racial bias" condition. The magnitude of the rating differences between Black and White applicants will be smaller in the "climate for equality" condition.

Old-Fashioned and Modern Racism Explicit Measures

Stereotypes and prejudice can manifest themselves in different ways. One of the most obvious and salient forms is old-fashioned racism, which is characteristic of blatant attitudes of the inferiority of Blacks and open bigotry. In contrast to these openly espoused racial prejudices, modern racism has evolved as a newer and subtler form of racism (McConahay, 1986). Modern racism is more indirect and rationalized where negative attitudes toward Blacks are masked with nonracial reasons to preserve a nonprejudicial self-image (Brief, 1998). The central tenets and beliefs of modern racists include the thinking that discrimination is a thing of the past, Blacks are using unfair tactics to push themselves into places where they are not wanted, and gains by Blacks are not deserved (McConahay, 1986). Modern racists see their beliefs as constituting empirical facts (Brief, 1998; McConahay, 1986). They do not believe that they are racist because they conceptualize a racist as someone who espouses the old-fashioned or hostile racism beliefs. As illustrated by Brief et al. (2000), modern racists will act on their beliefs when there is some social norm (e.g., climate for racial bias) justifying their discriminatory behaviors. In the present study, we aim to constructively replicate this Brief et al. finding by using our comparative definition of discrimination as well as measuring old-fashioned and modern racism:

Hypothesis 2 (H2): Organizational climate will interact with participants' racist attitudes (old-fashioned and modern) to affect the average ratings of Black compared with White applicants. Specifically, the more racist participants (as measured by the explicit old-fashioned and modern racism measures) will produce more discriminatory ratings in the "climate for racial bias" condition. There should be no relationship between the explicit racism measures and average applicant ratings in the "climate for equality" condition.

As stated in H2, we expect that the direction of the results will be similar for both the old-fashioned and modern racism scales. However, we expect that the effect will be weaker for the old-fashioned measure because of the blatant, extreme nature of the items on this scale.

Implicit Racist Attitudes

As discussed above, the most common way to measure racist attitudes is through explicit self-report measures. Unfortunately,

such measures are influenced by self-presentation biases in which respondents' scores reflect not only their attitudes but also the deliberate and conscious manipulation of responses to regulate their impression to others (Dunton & Fazio, 1997; Plant & Devine, 1998). One way to minimize the influence of self-presentation bias in the measurement of racist attitudes is through the inclusion of implicit attitude measurement techniques. These implicit measurement techniques seek to indirectly assess a construct without having to directly ask participants for a verbal report (Fazio & Olson, 2003). Thus, implicit measures assess attitudes in a more subtle fashion than do more traditional self-report measures. Indeed, the discrepancy between prejudicial attitudes assessed with implicit and explicit measures has led to questions of the trustworthiness of easily monitored explicit responses such as verbal reports and self-report ratings (Fazio et al., 1995).

As the use of implicit measures to assess attitudes has grown in recent years, so have questions regarding their meaning and validity. For example, Crandall and Eshleman (2003) have noted that although implicit attitude measurement holds promise, they also questioned the degree to which these measures reflect genuine prejudice, and they suggested that "genuine prejudice and implicit attitudes are related, but they are not the same concept" (p. 435). Fazio and Olson (2003) recently reviewed several types of implicit measurement techniques and concluded that "implicit measures have the potential to serve as useful methodological tools for testing hypotheses" (p. 320). Given this initial evidence for the validity and potential utility of implicit measurement methods, there are several reasons, besides the freedom from self-presentation biases, why implicit attitude measures may be more useful than explicit attitude measures. For example, implicit attitude measurement techniques are believed to reflect the more ingrained beliefs of the respondents. These ingrained beliefs may be activated automatically outside of the person's consciousness (Greenwald & Banaji, 1995), and thus, they might influence behavior more than explicit attitudes that are produced as a result of conscious, deliberate processing (Bargh & Chartrand, 1999). Another possible advantage is that individuals may not be able to adequately access their introspective processes (Nisbett & Wilson, 1977). Thus, attitudes measured implicitly should be more predictive of behavior than attitudes measured explicitly. Therefore, a logical extension of H2 is to examine it with implicit attitudes:

Hypothesis 3 (H3): The relationship between individuals' implicit racist attitudes and the ratings of Black applicants (compared with the ratings of White applicants) will be moderated by the climate condition. In particular, participants who hold racist views measured implicitly will act in a discriminatory fashion in the climate for racial bias condition, but these individuals should not exhibit any discriminatory behavior in the climate for equality condition.

H3 is identical to H2 except that it substitutes implicit for explicit attitude measurement. On the basis of the assumption that implicit attitudes are more advantageous than are explicit attitudes, this interaction should be stronger for the implicit rather than explicit measures.

In the current study, we measured implicit attitudes with the Implicit Association Test (IAT) developed by Greenwald, McGhee, and Schwartz (1998). The IAT is a flexible tool that can

be readily adapted to measure a variety of concepts. It is administered via a computer and it assesses implicit attitudes by measuring the response latency and errors associated with individuals sorting words from four concepts into only two categories. In the current study, we used the same concepts, categories, and words as in the Greenwald et al. (1998) race IAT measure.

There is some debate regarding the meaningfulness of this measure (e.g., Devine, 2001). For example, it has been suggested that shifts in response criteria can impact IAT scores (Brendl, Markman, & Messner, 2001) or that the IAT reflects the environment that a person is a part of as opposed to that person's endorsed attitudes (Karpinski & Hilton, 2001). The IAT seems to be susceptible to in-group/out-group distinctions, suggesting the automatic nature of intergroup bias (Ashburn-Nardo, Voils, and Monteith, 2001). Research also illustrates that manipulations in the situation or context can impact the magnitude of results (e.g., Dasgupta & Greenwald, 2001).

Although these studies document factors that affect the IAT, there is also a great deal of validity evidence for it. Greenwald and Nosek (2001) reviewed over 30 studies that discussed the psychometric and validity evidence for the IAT. Research has shown that the IAT can detect stable attitude differences (Greenwald et al., 1998), and the implicit attitude score is not influenced by familiarity of the words used in the task (Dasgupta, McGhee, Greenwald, & Banaji, 2000). Further, the IAT has shown convergent validity with other latency measures and priming tasks (Rudman & Kilianski, 2000) as well as with a physiological measure (Phelps et al., 2000). Finally, there is also support for predictive validity of the IAT in predicting more subtle behavior such as nonverbal behavior (McConnell & Leibold, 2001). Overall, there has been much research that has provided evidence for the psychometric properties and the internal, convergent, discriminant, and predictive validity of the IAT (Greenwald & Nosek, 2001). The present study adds to this validity evidence by assessing whether the IAT predicts more macrolevel behavior such as discriminatory hiring decisions.

Motivation to Control Prejudice

One possible explanation for the differences between implicit and explicit attitudes is that people typically do not like to be thought of as prejudiced. In other words, some people are motivated to control their prejudice. Dunton and Fazio (1997) have shown that implicitly prejudiced individuals with high motivation to control their prejudice will generally respond in a nonprejudiced way on self-report (i.e., explicit) measures. Thus, it is reasonable to expect that there will be less association between the explicit and implicit racism measures when people are motivated to control their prejudices.

Hypothesis 4 (H4): The relationship between implicit and explicit racial attitudes will be moderated by motivation to control prejudice. Specifically, the stronger the implicit prejudicial attitudes and the stronger the motivation to control prejudice, the more negative the relationship will be between implicit and explicit attitudes.

This relationship is expected to be stronger for old-fashioned rather than modern racist attitudes as modern racism is purported to be subtler and less susceptible to presentational biases.

Method

Participants

Participants were 103 undergraduates from a large mid-Atlantic public university who received course credit. Ages ranged from 18 to 30 with a mean of 18.8 ($SD = 1.5$) years. The majority of the participants were women (61.2%; men = 38.8%), and because the purpose of the experiment was to assess bias against Blacks, all participants were non-Black with Whites as the majority (White = 81%; Asian = 7%; Latino/Hispanic = 6%; Arab = 2%; and Other = 4%). There were no significant differences among these groups for any of the study variables.

Measures

Explicit racial attitudes. Racism was measured explicitly with two self-report scales: the Attitudes Toward Blacks Scale (ATB; Brigham, 1993) and the MRS. The ATB is a 20-item measure of old-fashioned racist attitudes on a 7-point Likert-type scale. For example, participants are asked if they would dislike living near Black people and if they feel that Black and White people are equal. The reliability of participants' scores on this scale was acceptable with a coefficient alpha of .89. In contrast to the ATB, the MRS assesses modern racism. The MRS contains seven items measured on a 7-point Likert-type scale. An example item is "Discrimination against Blacks is no longer a problem in the United States." The modern racism items were embedded with 14 other items assessing attitudes toward other issues (e.g., homosexuality and abortion) to limit potential reactivity effects. The reliability of the scores of this scale was acceptable with a coefficient alpha of .81.

Implicit racial attitudes. Implicit racism was assessed with the IAT. The IAT measures racist attitudes by recording the speed and accuracy with which participants can categorize words. Participants first sorted words into a descriptive category relevant to race (i.e., names that Greenwald et al. [1998] had determined to be perceived as prototypical of Whites or Blacks) and then sorted the next group of words into an evaluative category (i.e., pleasant vs. unpleasant words). In particular, names appeared on the computer screen one at a time, and participants had to categorize these names as being either "Black" or "White" using the left or right key on the computer keyboard. In the next trial, words appeared on the computer screen one at a time and participants had to categorize them as being either "pleasant" or "unpleasant." These categorization tasks were then combined and participants had to categorize 40 words as either belonging to the "White or pleasant" category or the "Black or unpleasant" category. The speed and accuracy of the categorization process were recorded. After this combined task trial, the race categories were switched to allow for practice and were then combined with the evaluative category. That is, participants determined whether a word belonged to the "White or pleasant" category versus the "Black or pleasant" category for another 40 words.¹ An example of this sequence of trials for the IAT can be seen in Figure 1.

We focused on both the speed (response latency) as well as accuracy (percentage of errors) in the word classifications as our assessment of implicit attitudes. We examined the degree to which participants were slower in their responding and made more errors (initially placed the word in the wrong category) when the "White and unpleasant" categories were paired than when "White and pleasant" were paired.² In particular, latencies and percentage of errors for the "White and pleasant" trial were subtracted from the "White and unpleasant" trial, which results in positive latencies and percentage of errors being indicative of implicit racist attitudes (individuals can associate "White and pleasant" faster and make less errors than they can with "Black and pleasant"). We followed the procedure of Greenwald et al. (1998) and recoded responses below 300 ms and above 3,000 ms, and we eliminated cases with an average error rate of over 20% (indicative of random responding), which resulted in only a small number of cases being deleted (less than 5% of the sample; after deletion of these cases, the final sample was 103 participants).

Average response latencies ranged from -368.03 ms to 739.15 ms with a mean of 233.52 ms ($SD = 168.36$). This positive value indicates that the average implicit racial attitude for our sample was somewhat negatively biased against Blacks (e.g., faster classification for the "White and pleasant" than for the "White and unpleasant"). The error rate percentage ranged from -10% to 15% with an average of 1.5% ($SD = 4.63$), which also indicates that the average implicit attitude was somewhat negatively biased against Blacks.

We subjected these two measures to an exploratory principal components factor analysis, and by examining the eigenvalues we found evidence that only one factor emerged. Both scales had factor loadings of .79 with this single factor. Using these factor loadings and the reliability formula provided by Bollen (1989), we estimated the reliability of each scale to be .63. As these two measures are on different metrics, we created a composite implicit racist attitude score by using z scores to standardize the response latency and the error rate percentage and then by adding these two z scores together. Using the linear composite reliability formula provided by Nunnally and Bernstein (1994), we estimated the reliability of the composite implicit measure to be .70.

Motivation to control prejudice. Motivation to control prejudice was assessed through the use of Plant and Devine's (1998) External subscale on the Motivation to Respond Without Prejudice measure. This External subscale measures motivation to hide racial prejudices in order to conform to societal norms and appear nonprejudiced to others. The five items for this measure were responded to on a 9-point Likert-type scale. An example item is "I try to hide any negative thoughts about Black people in order to avoid negative reactions from others." The reliability of participants' scores on this scale was acceptable with a coefficient alpha of .77. Validity evidence and freedom from social desirability concerns for this scale have been demonstrated on the basis of small correlations with several social desirability scales (Plant & Devine, 1998).

Experimental task and racial discrimination measure. Participants completed the in-basket exercise used by Brief et al. (2000). It contained many tasks typically encountered by managers (e.g., determining compensation for a newly hired employee). Embedded in this in-basket was a "hiring recommendation" task. Participants were provided with the dossiers of eight job applicants and were instructed to evaluate them. The dossiers provided information about each applicant's education, prior work experience, race, gender, and hobbies. These dossiers were written such that six of the eight applicants had outstanding qualifications. Participants rated each applicant to the degree to which they were an exceptional referral on a 5-point Likert-type scale ranging from 1 (*should not have been referred*) to 5 (*excellent referral*). Prior work has shown that there are no differences among these six candidates when race information is removed (Brief, Buttram, Elliott, Reizenstein, & McCline, 1995). The race of these applicants was randomly assigned with half (three) of the qualified applicants as Black and the other half (three) as White. In addition to race, the sex of the applicants was also randomly assigned so that one each of the qualified Black and White candidates was a woman (i.e., there were two Black men, two White men, one Black woman, and one White woman).

¹ This order was counterbalanced such that half of the participants first completed the pairing of "White or pleasant" versus "Black or unpleasant," whereas the other half of the participants first completed "White or unpleasant" versus "Black or pleasant." Further, the order of the specific words that appeared was randomized. Finally, consistent with Greenwald et al. (1998), there was one practice trial that took place before each of the combined categorization tasks in order to familiarize participants with the task. Data were not recorded for these practice trials.

² Alternatively, because of the nature of the measure, this could have been equally phrased regarding the degree to which participants were slower in their responding and made more errors when "Black and pleasant" categories are paired than when "Black and unpleasant" are paired.

Trial 1: Initial Target Categorization		
Sample Stimuli		
WHITE		BLACK
✓	HEATHER	
✓	ANDREW	
	ALONZO	✓
✓	EMILY	
	LATONYA	✓
	TYREE	✓
✓	HARRY	
	TAWANDA	✓

Trial 2: Initial Attribute Categorization		
Sample Stimuli		
pleasant		unpleasant
	sickness	✓
✓	freedom	
	death	✓
✓	miracle	
✓	happy	
✓	paradise	
	poison	✓
	disaster	✓

Trial 3: Initial Combined Categorization		
Sample Stimuli		
WHITE or pleasant		BLACK or unpleasant
	ALONZO	✓
✓	paradise	
	disaster	✓
✓	HEATHER	
✓	miracle	
	LATONYA	✓
✓	ANDREW	
	sickness	✓

Trial 4: Reversed Target Categorization		
Sample Stimuli		
BLACK		WHITE
✓	LATONYA	
	ANDREW	✓
	HARRY	✓
✓	ALONZO	
✓	TYREE	
	EMILY	✓
	HEATHER	✓
✓	TAWANDA	

Trial 5: Reversed Combined Categorization		
Sample Stimuli		
BLACK or pleasant		WHITE or unpleasant
	sickness	✓
✓	miracle	
✓	ALONZO	
✓	LATONYA	
	disaster	✓
	ANDREW	✓
✓	paradise	
	HEATHER	✓

Figure 1. Sample illustration of the Implicit Association Test (IAT). Participants completed a series of five trials in which the target concepts and attributes were introduced in the first two trials. The targets and attributes were combined in the third trial and reversed in the fifth trial after initially reversing the target categories in the fourth trial. The correct categorization of the sample stimuli that appears one at a time is illustrated with a check mark. Implicit racist attitudes exist if a participant takes longer and makes more errors when “Black or pleasant” (also “White or unpleasant”) are paired than when “Black or unpleasant” (also “White or pleasant”) are paired.

In their second study, Brief and colleagues (2000) used the average rating of the three qualified Black applicants as their measure of racial discrimination. Our measure was obtained by conducting within-individual regression analyses through the use of a dummy-coded race variable (i.e., 0 = White applicant; 1 = Black applicant) to predict a participant's ratings of the six applicants. More specifically, a hierarchical linear model (HLM) was conducted with the dummy-coded race variable used as a Level 1 (i.e., within-individual) predictor. The slopes for this dummy-coded variable were used as our dependent measure of racial discrimination. A negative slope was indicative of bias against the Black applicants (i.e., the mean for the Black applicants was lower than the mean for the White applicants), a zero slope was indicative of no racial bias (i.e., equal mean ratings of Black and White applicants), and a positive slope was indicative of a pro-Black

applicant bias (i.e., the mean for the Black applicants was higher than the mean for the White applicants). The use of the within-individual slope as our assessment of racial discrimination produced a sensitive measure because it accounts for any disparate ratings between Black and White applicants.

Procedure

At the beginning of the semester, introductory psychology students participated in a mass testing session in which they were asked to complete a variety of measures. Included were the two explicit racist attitude measures (ATB and MRS) as well as the Motivation to Respond Without Prejudice Scale. These measures were spaced equally among a number of

Table 1
Means, Standard Deviations, and Intercorrelations Among Predictor Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Attitude Toward Blacks (ATB) Scale	2.64	0.88	—						
2. Modern Racism Scale (MRS)	2.79	1.05	.73**	—					
3. Implicit z-score ^a composite	0.00	1.59	.12	.12	—				
4. Motivation to control prejudice	4.98	1.62	.06	-.17	.07	—			
5. Mean rating of White applicants ^c	4.30	0.53	-.15	-.22*	-.02	-.03	—		
6. Mean rating of Black applicants ^c	3.73	0.74	-.19	-.18	-.29**	.02	.29**	—	
7. Climate condition ^b	0.48	0.50	.10	.12	.12	.02	.23*	-.25*	—

Note. As a result of missing data, *n* ranges from 99–101. Higher scores equal greater amounts of the construct.

^a The implicit measure of racism is a standardized z-score composite, thus the mean is 0. This sample indicated implicit racist attitudes on the basis of the unstandardized scores. ^b For the climate condition, 0 = climate for equality and 1 = climate for racial bias. ^c Although our measure of discrimination was the slope obtained by conducting within-individual regression analyses using a dummy-coded race variable of the ratings of the six applicants, we have provided the mean ratings of the White and Black applicants for illustrative purposes.

* $p < .05$. ** $p < .01$.

other scales in the mass testing session to minimize any response confounds from potentially completing the measures sequentially. Approximately 1 month later, participants were recruited from the mass testing sample for the laboratory portion of the study.

Upon arrival, participants were asked to play the role of a manager and complete the in-basket exercise. Participants were randomly assigned to either the climate for equality or the climate for racial bias condition. This manipulation took place through a memo from the president of the company. In both conditions, the president instructed individuals to take into account applicants' education and experience in making their evaluations of each candidate. However, for participants in the climate for racial bias condition, the president's memo also stated the following:

Given that the vast majority of our workforce is White, it is essential we put a White person in the VP position. I do not want to jeopardize the fine relationship we have with our people in the units. Betty (the outgoing vice president) worked long and hard to get those folks to trust us, and I do not want her replacement to have to overcome any personal barriers.

Participants in the climate for equality condition did not receive this statement. After completion of the in-basket and the embedded hiring recommendation task, participants completed a manipulation-check item, the implicit measure of racism, and a demographic questionnaire.

Manipulation check. In order to determine whether participants were cognizant of the instructions in each condition, participants were asked to recall the hiring preferences of the president. The item asked whether the president preferred to hire applicants that were White, Black, Latino, or of no stated preference.

Statistical analyses. We tested the first three hypotheses with a random slope HLM analysis and the fourth with moderated regression. The hypotheses using HLM were tested through the use of between-person (i.e., Level 2) variables to predict the magnitude of the within-person slope measure of racial discrimination.

Results

Manipulation Check and Preliminary Evidence of Racial Discrimination

Analysis of the manipulation check indicated the hiring preferences of the president were correctly recalled as 95.15% of the participants identified the proper preference for their respective condition; this indicates that the climate for racial bias versus climate for equality manipulation worked. We first performed an

HLM analysis to assess the extent to which ratings were biased. With the within-person Black–White slope (i.e., the Level 1 predictor was the dummy-coded race variable) as our measure of racial bias and no Level 2 predictors, results indicated an overall bias against Blacks; that is, the Black applicants were rated lower than were the White applicants (i.e., $R^2_{\text{within}} = .26$, $b_{y,x} = -.58$, $t[96] = -7.25$, $p < .05$).³ We also examined the variance of this slope and found that it was significantly different from zero (i.e., $\sigma^2_{\text{slope}} = 0.27$, $\chi^2(96, N = 99) = 172.92$, $p < .05$), which indicates that some of the participants exhibited more bias than did others.⁴ As Black applicants were rated lower and there were meaningful individual differences in this degree of bias, we proceeded to test our hypotheses in order to explain these slope differences.

Test of Hypotheses

Table 1 presents the means, standard deviations, and intercorrelations among the study variables. H1 predicted that participants in the climate for racial bias condition would exhibit greater discrimination than would participants in the climate for equality condition. To test H1, we ran a randomized slope HLM model in which we predicted the Level 1 Black–White slope through the use of a Level 2 dummy-coded corporate climate predictor (i.e., 0 = climate for equality; 1 = climate for racial bias). The Level 2

³ As indicated earlier, the in-basket task contained six exceptional candidates: two Black men, one Black woman, two White men, one White woman. Given that the applicants differed on race and gender, it is possible that the gender of the applicant interacted with applicant race to influence participant's ratings. To test whether race and gender interacted, we performed an HLM analysis in which the race, gender, and the interaction of these two variables were used to predict participant ratings. The analyses revealed that the Race \times Gender interaction was not significant ($R^2_{\text{within}} = .00$, $b_{y,x} = -.11$, $t[96] = -1.00$, *ns*).

⁴ The HLM analyses indicated that there was a significant applicant gender effect in that male applicants were rated significantly higher than were female applicants ($R^2_{\text{within}} = .05$, $b_{y,x} = -.28$, $t[96] = -4.87$, $p < .05$). Unlike the race of the applicant, however, this gender effect did not significantly differ across participants ($\sigma^2_{\text{slope}} = 0.02$, $\chi^2[96, N = 99] = 86.72$, *ns*).

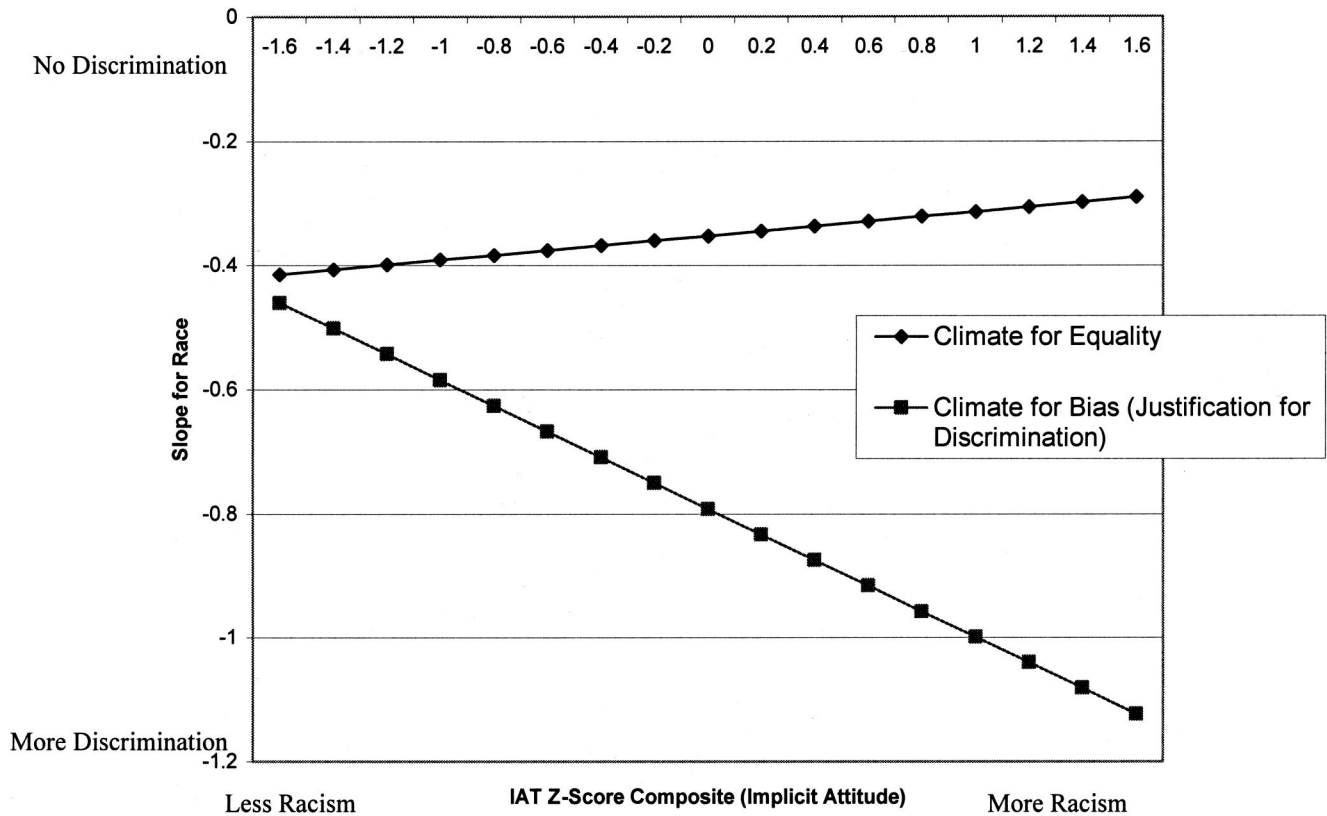


Figure 2. Relationship of Implicit Association Test (IAT) z-score composite and slope for race moderated by corporate climate condition.

climate variable significantly predicted the magnitude of the Black–White slope ($R^2_{\text{between}} = .33$, $\gamma = -.50$, $t(95) = -3.57$, $p < .05$). Consistent with Brief et al. (2000), participants in the climate for racial bias condition exhibited a stronger degree of bias than did participants in the climate for equality condition. An examination of the within-person Black–White slope indicates that there was still a significant amount of between-person slope variance ($\sigma^2 = .18$, $\chi^2[95] = 146.52$, $p < .05$), even after accounting for the corporate climate manipulation.

H2 predicted that the relationship between participants' explicit racist attitudes and discriminatory ratings would be moderated by the corporate climate manipulation such that individuals would exhibit more discrimination against Black applicants as their degree of explicit racial attitudes increased, but only in the climate for racial bias condition. H2 was tested for the ATB and MRS separately. With respect to the ATB, a random slope HLM model was conducted in which the Level 1 Black–White slope was predicted by using the Level 2 dummy-coded climate predictor, the ATB, and the interaction between these two variables. Contrary to H2, the interaction term was not significant ($\Delta R^2_{\text{between}} = .01$, $\gamma = -.20$, $t[93] = -1.18$, *ns*). Similarly, the random slope HLM with the MRS failed to find a significant interaction between the corporate climate manipulation and the MRS ($\Delta R^2_{\text{between}} = .00$, $\gamma = -.10$, $t[93] = -0.91$, *ns*). As H2 was not supported, we failed to replicate the interaction reported in Brief et al. (2000).

H3 was similar to H2 except that it explored the utility of the implicit attitude measure rather than the explicit measures. As

predicted, HLM analysis indicated that the IAT z-score composite significantly interacted with the climate condition ($\Delta R^2_{\text{between}} = .05$, $\gamma = -.17$, $t[93] = -2.03$, $p < .05$),⁵ and this interaction is shown in Figure 2. The amount of discrimination against Blacks was greater for participants with more implicitly racist attitudes in the climate for racial bias condition. The relationship between discrimination and implicit racist attitudes was almost nonexistent, with only a slight upward trend in the climate for equality condition. In summary, there was support for H3; the climate for racial bias manipulation sent a signal about social norms for discrimination that resulted in implicit racial attitudes being related to disparate ratings of Black and White applicants.

H4 predicted that the relationship between explicitly and implicitly measured racial attitudes would be moderated by motivation to control prejudice. Hierarchical multiple regressions illustrated that the predicted interaction was significant for the ATB scale ($\Delta R^2 = .05$, $F_{\text{inc}}(1, 95) = 4.76$, $p < .05$), although it did not reach significance for the MRS ($\Delta R^2 = .02$, $F_{\text{inc}}(1, 95) = 2.09$, *ns*; see Table 2). This significant interaction for the ATB is depicted in Figure 3. This interaction is consistent with the hypothesized direction; that is, when individuals have low motivation to control their prejudice, there is a positive relationship between the implicit

⁵ The final Level 2 equation consisting of the condition variable, the implicit racism measure, and the interaction between these measures accounted for 46% of the between-person variance.

Table 2
Moderated Regression Analyses of Explicit Racist Attitudes and Motivation to Control Prejudice on Implicit Racist Attitudes

Variable	β	SE	ΔR^2	ΔF
Modern racism				
Modern racism (A)	0.131	.166	.02	1.02
Motivation to control prejudice (B)	0.088	.101		
A \times B	-0.561	.102	.02	2.09
Attitude toward Blacks				
Attitude toward Blacks (A)	0.112	.196	.02	0.81
Motivation to control prejudice (B)	0.056	.100		
A \times B	-1.103*	.128	.05*	4.76*

* $p < .05$.

and explicit racism measures. However, when individuals are highly motivated to control their prejudice, there is a slight negative relationship between their implicit and explicit racism measures. When highly motivated to hide their prejudice, individuals holding implicit racist attitudes tend to distort their explicit racism responses more in order to report less explicit racial stereotypes. Although we originally hypothesized that both the ATB as well as the MRS would show an effect, the fact that only the ATB interaction was significant is not surprising as this scale taps a

more old-fashioned racism, which is easier to monitor and control than is modern racism.

Discussion

The purpose of this study was to constructively replicate and extend the research conducted by Brief et al. (2000) that concerned employment discrimination by using a scenario-based laboratory study with undergraduate students. Our study built upon this prior work in several ways in order to seek a more detailed understanding of the antecedents of employment discrimination. First, we included a measure of old-fashioned explicit racist attitudes in addition to modern racism. The old-fashioned explicit racism measure was included to ascertain whether modern racism scales were really needed to identify the individuals in our study that would act in a prejudicial manner. Second, we included an implicit racial attitude measure in addition to these two explicit attitude measures. Thus, there was a graded distinction between explicit and implicit racist attitudes from old-fashioned (ATB), to modern (MRS), to implicit (IAT). Third, we included a measure of motivation to control prejudice to directly test whether it is a self-presentation bias that accounts for the different results obtained by explicit and implicit measures. Finally, we used HLM to produce a more sensitive measure of racial discrimination as this measure directly compares differences in the ratings of Blacks and Whites. Taken together, these additions allowed us to constructively replicate Brief et al.'s study and to test new hypotheses to provide a greater understanding of employment discrimination.

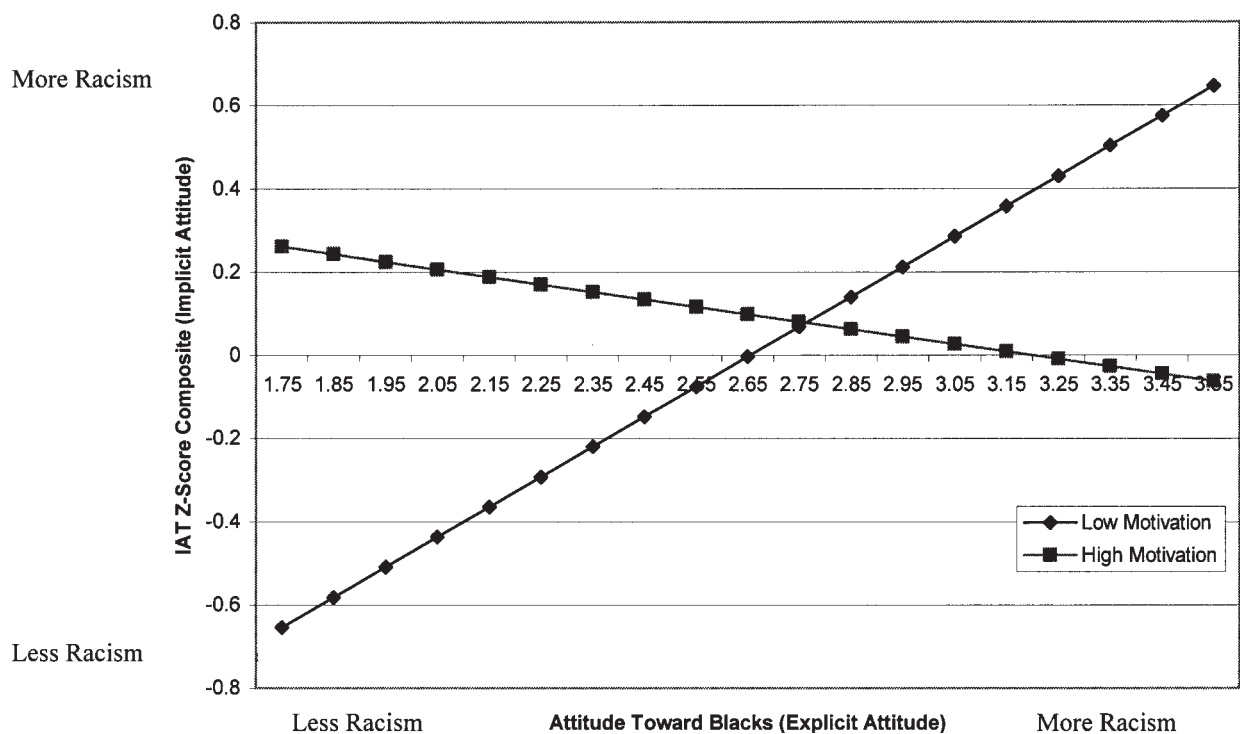


Figure 3. Relationship of implicit (Implicit Association Test [IAT] z-score composite) and explicit (Attitude Toward Blacks Scale) attitudes moderated by motivation to control prejudice.

The results help to illustrate the differences between implicit and explicit attitudes in understanding bias in organizations. We were unable to replicate Brief et al.'s (2000) interaction between explicit racist attitudes and the climate for racial bias manipulation. However, there are several potential explanations for why we were unable to find similar results. For example, we used a different measure of discrimination than did Brief et al. as we compared ratings of both White and Black applicants instead of just assessing ratings of Black applicants. This comparison provides a different type of assessment of discrimination that focuses on disparate treatment, which may have led to the discrepant results. Another potential explanation may be that the sample for the current study reported less racist attitudes than did the sample in the Brief et al. study (as measured by the MRS). It could be the case that our sample was less racist than was the earlier sample. Alternatively, the topic of race has become even more salient in recent years; thus, it may be that the current sample exhibited more self-presentational forces in responding to the explicit measures of racism, which masked any effects linking self-reported racist views on questionnaires to discriminatory behavior. This potential for self-presentational forces contributing to the discrepant findings is strengthened by the fact that motivation to control prejudice moderated the relationship between one of the explicit measures (ATB) and the implicit measure of racism.

Although we were unable to replicate this finding with explicit attitudes, we did find a significant interaction through the use of implicit attitudes. More specifically, implicit racism interacted with a climate for racial bias to predict discrimination; when individuals were given a business justification for racial discrimination their implicit racist attitudes were positively related to their discriminatory behavior. There are several implications of these laboratory-based findings with an undergraduate student sample. First, although we could not directly replicate Brief et al.'s (2000) findings with the explicit racism measures, this interaction conceptually replicates the finding that subtle biases will be acted upon in the right social environment. Second, our results demonstrate that implicit attitudes can be used to predict meaningful macrolevel behavior. Though there have been a few studies relating the IAT to behavior (e.g., McConnell & Leibold, 2001), these studies tend to relate the IAT to microlevel behaviors (e.g., less speaking and smiling with a Black experimenter) or to survey responses. This is one of the first studies to demonstrate that the IAT can predict racially biased discriminatory actions. Thus, this study highlights the usefulness of assessing attitudes with an implicit technique and the potential importance of using it to predict discrimination.

Finally, the finding that the relationship between implicit and explicit attitudes is moderated by the motivation to control prejudice is of interest because it verifies the hypothesized mechanism by which implicit and explicit attitudes are related to one another. When researchers use an explicit measurement technique, individuals who are motivated to control their responses may indeed do so. Conversely, individuals do not seem to monitor and change their responses when attitudes are assessed implicitly. This finding lends support to the assertion that explicit attitude measurement may be prone to self-presentational forces, whereas implicit techniques are not.

It should be noted that these hypotheses do not depend on whether individuals can accurately assess their implicit attitudes.

There is some question as to the degree to which implicit attitudes are available to introspection (Fazio & Olson, 2003). Regardless, these findings illustrate the effects of implicit attitudes and their difference from explicit attitudes. Results show that whether or not individuals can accurately assess their own implicit attitudes, these implicit attitudes are indeed predictive of behavior and are different than explicit attitudes.

As with any study, the current research has several limitations. As a laboratory study conducted with undergraduates, several generalizability issues arise in the interpretation of results. For example, the use of "paper" candidates may be problematic as it raises questions of external validity. Further, as the participants were students, they may have had very little experience in the type of role (manager) that they played during the in-basket exercise. Though these limitations are inherent to this laboratory study, we felt that it was necessary to initially study this phenomenon in the lab to obtain a high degree of control so that the candidates being rated were the same except for race and that an accurate measurement of implicit attitudes was obtained. Even with these potential limitations in generalizability, we believe the current study makes an important contribution to the literature.

The present findings have both theoretical and practical implications. Implicit attitudes are not only different than are self-reported explicit attitudes, but the present research illustrates that implicit attitudes may be more predictive of behavior in certain situations. Therefore, it is important to recognize the difference between implicit and explicit attitudes and the resulting impact on behavior. In terms of practical contributions, our results suggest that when trying to understand the reactions and behaviors of individuals who are in a position to discriminate against certain groups of individuals, one cannot rely on explicitly espoused attitudes alone, but instead one may need to understand the characteristics of the situation, the motivation of the individuals to conceal their prejudice, and certain implicit attitudes.

The current study extends the work by Brief et al. (2000) by illustrating that implicit attitudes are important components in understanding employee discrimination. This study shows that motivation to control prejudice can be used to potentially explain the distinction between implicit and explicit attitudes. It also provides several reasons why implicit attitudes may be ultimately more useful than explicit attitudes. The message that emerges from these findings suggests that as employment discrimination has changed in recent years, so should the conceptualization of the attitudes used to predict it.

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Received November 19, 2002

Revision received December 18, 2003

Accepted December 22, 2003 ■