

# Implicit Motivation to Control Prejudice

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## Abstract

Implicit motivation to control prejudice (IMCP) is a nonconscious goal to be egalitarian. This research examines whether IMCP affects unintentional discriminatory behavior. We operationalize IMCP as the interaction of an implicit negative attitude toward prejudice (NAP) and an implicit belief that oneself is prejudiced (BOP). Those high in both should be most motivated to control their prejudice. Those relatively high in implicit negative attitude toward prejudice showed a weaker relation between the implicit association of Blacks with weapons and the tendency to “shoot” armed Black men faster than armed White men (the “Shooter Bias”) in a computer simulation. Consistent with our hypothesis, IMCP (the interaction of NAP and BOP) also moderated the relation between the stereotype and the Shooter Bias. However, simple comparisons do not support our thesis. While those high in both NAP and BOP showed a slightly negative relation between the implicit stereotype and the automatic discriminatory behavior, this effect is not statistically significant. Rather, those who have a strong association between self and prejudice (high BOP) but a weak association between prejudice and bad (low NAP) show the *strongest* relation between the implicit race-weapons stereotype and the Shooter Bias.

Keywords: implicit, automatic, motivation, stereotyping, prejudice, discrimination, egalitarianism, control

Recent theoretical and empirical developments in three areas of research on social cognition converge to suggest that some people may have implicit (i.e., nonconscious) motivations to control their prejudice and thereby inhibit unintended, automatic discriminatory behavior. First, research on implicit intergroup attitudes (e.g., Greenwald & Banaji, 1995) has revealed that they operate outside of conscious awareness and predict unintended, automatic behaviors (Cunningham, Preacher, & Banaji, 2001; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997). Second, research employing questionnaire measures of motivations to control prejudice (Dunton & Fazio, 1997; Plant & Devine, 1998) has demonstrated that there are meaningful individual differences in such motivations that moderate the explicit expression of prejudice (e.g., Fazio, Jackson, Dunton, & Williams, 1995). Finally, recent studies have indicated that, like cognitions and affect, goals and motives can exist and operate outside of conscious awareness and control (Chartrand & Bargh, 1996; Glaser & Banaji, 1999; Glaser & Kihlstrom, 2005; Shah & Kruglanski, 2003). Accordingly, goals to be egalitarian may operate outside of conscious awareness and control. If they do, they could serve to inhibit unintended, automatic prejudiced attitudes and behavior, processes previously presumed to be uncontrollable (Bargh, 1999). We propose a new construct, Implicit Motivation to Control Prejudice (IMCP), which is distinct from its questionnaire-assessed counterparts, in that it reflects processes that operate outside of conscious awareness and control and is capable of inhibiting unintended expressions of prejudice.

Recent research suggests that motivation to control prejudice can operate implicitly and automatically. Studies using Plant and Devine's (1998) Internal and External Motivation to Respond without Prejudice Scales have yielded some relevant results. These researchers' Internal subscale (IMS) is designed to assess personally endorsed, internalized goals to be non-

prejudiced. The External subscale (EMS), on the other hand, aims to tap more extrinsic concerns with appearing prejudiced. Those high in IMS and low in EMS, accordingly, are theorized to have the purest, most intrinsic egalitarian motives that are more likely to be deeply internalized. In fact, Devine, Plant, Amodio, Harmon-Jones, and Vance (2002) found that those who were high in IMS and low in EMS exhibited less implicit race bias in a sequential priming task. Similarly, Hausmann and Ryan (2004) reported that IMS was negatively related to implicit bias. Amodio, Harmon-Jones, and Devine (2003) found that high IMS/low EMS participants exhibited less race bias as indexed by differential startle eyeblinks to Black and White face stimuli. These studies measure only the relation between IMS/EMS and implicit bias. Although suggestive of implicit motivation and automatic control, their results could be explained by high-IMS/low-EMS people having less bias.

The most direct evidence of implicit motivation to control prejudice comes from work by Moskowitz, Gollwitzer, Wasel, and Schaal (1999). Their indirect measure of “chronic egalitarianism” predicted the inhibition of stereotype activation. They assessed chronic egalitarianism by measuring participants’ attempts to compensate for having exhibited gender stereotyping, and found that those presumed high in chronic egalitarianism did not exhibit automatic gender stereotyping, while low egalitarians did. Moskowitz et al. (1999, Experiment 4) provided more direct evidence of stereotype inhibition, finding negative priming of gender attributes among high chronic egalitarians only.

*Measuring Implicit Motivation to Control Prejudice.* Research on nonconscious cognitions and evaluations has employed methods that afford relatively direct inferences, specifically measuring the strengths of associations by the speed of responding to paired stimuli. Motivations, however, appear to be different in this regard. While they can be primed, even

subliminally (e.g., Shah & Kruglanski, 2003), measuring them in a similar manner is more complex, perhaps due to their dynamic nature. They do not represent an association between two static constructs but rather a drive toward a desired state.

In the absence of direct access to implicit motivation to control prejudice, we propose measuring two logical antecedents: an implicit *negative attitude toward prejudice* (NAP) and an implicit *belief that oneself is prejudiced* (BOP). Our theory holds that those who are high in both of these orientations will be most motivated to control their prejudice. Specifically, a negative attitude toward prejudice would incline one to avoid it, but perhaps only if one was concerned that she is prone to it. Similarly, the belief that oneself is prone to prejudice should motivate efforts to control it, but only to the extent that it is perceived as a bad thing.

We use the Implicit Association Test (IAT), a well-validated measure of implicit attitudes and beliefs (Cunningham, Preacher, & Banaji, 2001; Nosek, Greenwald, & Banaji, 2005), to assess NAP and BOP at the implicit level. To measure BOP we constructed an IAT that paired the categories “prejudiced” and “tolerant” with the categories “me” and “not me.” NAP was assessed with an IAT pairing “prejudice” and “tolerance” with “bad” and “good.” Those highest in NAP and BOP — both implicit constructs — should be most motivated to control prejudice.

It has been shown that explicit motivation to control prejudice moderates the relation between implicit prejudice and explicit prejudice (Fazio et al., 1995), that those high in IMS and low in EMS exhibit lower levels of implicit bias (e.g., Devine et al., 2002; Amodio et al., 2003), that those high in IMS can also exhibit less implicit bias (Hausmann & Ryan, 2004), and that those high in chronic egalitarianism inhibit automatic stereotype activation (Moskowitz et al., 1999). What then, would IMCP uniquely predict? Although other measures have shown weaker implicit stereotyping among those high in motivation to control prejudice, it remains possible

that the vestiges of those stereotypes nevertheless influence spontaneous behavior. If IMCP reflects a truly nonconscious goal, it should have the effect of inhibiting automatic discriminatory behavior *in spite of* implicit stereotypes. A strong test of IMCP would therefore involve demonstrating a moderating effect on the relation between an implicit stereotype and a related automatic discriminatory behavior.<sup>1</sup>

We designed an experiment to test this hypothesis. In addition to using our IAT measures of BOP and NAP to assess IMCP, we employed a race-weapons stereotype (RWS) IAT (Blacks/Whites and weapons/tools) and an adaptation of the “Shooter Task,” a computer simulation developed by Correll et al. (2002) involving a series of images wherein a Black or White man is holding either a gun or a benign object. Participants are instructed to “shoot” or indicate safety as quickly as possible when there is a gun or benign object, respectively. Correll et al. (2002) found participants to be faster and more likely to shoot when the target is Black and to indicate safety when the target is White. They also found that the Shooter Bias was related to the stereotype of Blacks as dangerous. The purpose of the present study is to test whether our operationalization of IMCP moderates a similar relationship. The use of the shooter task is especially important because, due to the speeded nature of the procedure and the strong stigmatization of racial bias in policing, the “Shooter Bias” (proneness to shoot Blacks) almost certainly reflects an unintended, automatic form of discrimination that one would control if one could.

## Method

### *Participants*

48 University of California, Berkeley undergraduate students participated for partial credit toward psychology courses. Thirty-one were women. Twenty-six reported being East Asian, eighteen White, three Latino/Latina, and one South Asian.

### *Procedure*

Participants performed a series of computerized tasks in the following fixed order: Shooter Task, BOP IAT, NAP IAT, Race Prejudice IAT, and Race-Weapons Stereotype (RWS) IAT. Following the computerized tasks, participants answered a series of questions, including several scales relating to prejudice and motivation to control prejudice, presented in random order. The implicit measures were given first because they were of primary interest, and their order was fixed to minimize error variance because we were investigating relations among the constructs rather than absolute levels of any particular bias.

*The Shooter Task.* The Shooter Task used in this study is adapted from the procedure developed by Correll et al. (2002)<sup>2</sup> to assess the tendency to shoot or refrain from shooting Blacks vs. Whites who are or are not holding guns. The “Shooter Bias” is a greater facility to shoot Blacks with guns and/or indicate safety for Whites without guns. In our procedure, each participant carries out a series of 56 experimental trials. There is a 1 second pause between trials. In each trial, a “get ready” screen appears for 1.5 seconds, followed by an image of a location (e.g., street corner, shopping plaza). After an interval of 1, 2, 3, or 4 seconds, an image of a man appears near the center of the background. He is either Black or White and is holding either a gun or a benign object (cell phone or soda can). When the target is holding a gun, the participant, who is grasping a computer gamestick, is supposed to squeeze the trigger as quickly as possible. When the target does not have a gun, the participant is supposed to pull back on the

gamestick to indicate safety. Each participant had fourteen trials in each condition, and there were ten different men from each race serving as targets.

*Implicit Belief that Oneself is Prejudiced.* One of the two hypothesized antecedents of IMCP, the implicit belief that oneself is prejudiced (BOP), was assessed using an IAT that paired categorizations of *me* (sample stimuli: I, me, my) vs. *not-me* (they, them, their) with *prejudiced* (unjust, bigoted) vs. *tolerant* (accepting, inclusive). Participants had sets of 10 practice trials wherein they did the categorizations for each dimension (me vs. not-me; prejudiced vs. tolerant) separately and then combined before a data collection block including 40 trials – 10 trials for each category, randomly ordered. The task is to hit one of two possible response keys (left vs. right) to indicate to which category each word belongs. When categories are conceptually compatible (e.g., *flowers* with *pleasant* and *insects* with *unpleasant*) people tend to respond faster, and the IAT has proven effective in tapping meaningful individual and group differences in implicit attitudes and beliefs (e.g., Greenwald, McGee, & Schwartz, 1998; Greenwald & Nosek, 2003). For the BOP measure, faster responding when *me* and *not-me* are paired with *prejudiced* and *tolerant*, respectively, should reflect an implicit belief that oneself is prejudiced.

*Implicit Negative Attitude toward Prejudice.* The other hypothesized antecedent of IMCP, an implicit negative attitude toward prejudice (NAP), was measured using an IAT that paired categorizations of *bad* (sample stimuli: gloom, pain) vs. *good* (joy, warmth) with categorizations of *prejudiced* vs. *tolerant*. The procedure was identical to that of the BOP IAT except that the *me/not-me* categorization was replaced by *bad/good*. For the NAP measure, faster responding when *bad* and *good* are paired with *prejudiced* and *tolerant*, respectively, should reflect an implicit negative attitude toward prejudice.



*Implicit Race-Weapons Stereotype.* Correll et al. (2002) reported a positive correlation between a cultural stereotype (participants' self-reported beliefs about the extent to which Americans associate Blacks more than Whites with danger, aggression, and violence) and the Shooter Bias. We hypothesized that those high in IMCP should be motivated to prevent stereotypes from influencing their behavior. Accordingly, we employed a race-weapons stereotype (RWS) IAT that paired categorizations of Black and White sounding names (Malik, Tyrone, Chip, Brad) with categorizations of words naming either weapons (gun, pistol) or tools (chisel, wrench). To the extent that one is faster to make the categorizations when Black and weapons are paired, this should reflect a stereotypic association between race and weapons, if not danger more generally. We also administered a standard Black/White-bad/good IAT (e.g., Greenwald et al., 1998), referred to as Implicit Preference for Whites (IPW). Correll et al. (2002) had not found prejudice to be related to the Shooter Bias (and neither did we in this study).

*Explicit Questionnaire Measures.* After the implicit measures were carried out, a series of questionnaires were administered in random order, on the computer. Explicit measures of motivation to control prejudice were included. Specifically, Dunton and Fazio's (1997) Motivation to Control Prejudiced Reactions (MCPR) scale and Plant and Devine's (1998) Internal and External Motivation to Respond without Prejudice Scales (IMS and EMS, respectively) were administered. These two latter subscales are intended to assess intrinsic, personally important (internal) motivations for avoiding prejudice and motivation reflecting extrinsic, societal (external) pressures.

To assess explicit prejudice, Katz and Hass's (1988) Pro-Black/Anti-Black Attitudes Questionnaire was used, as was McConahay, Hardee, and Batts's (1981) Modern Racism Scale.

Finally, participants were asked to self-identify their political ideology on a seven-point scale from “very liberal” to “very conservative.”

### *Predictions*

In the Shooter Task, we predicted that, consistent with Correll et al.’s (2002) findings, participants would be faster on average to shoot Black targets with guns than White targets with guns and pull back faster for White targets without guns than for Black targets without guns. There is no prior research on implicit BOP, but to the extent that prejudice is very negatively valued, we expected most people to dissociate themselves from it, scoring negatively on BOP. With regard to the NAP IAT, because prejudice is very negatively viewed, we predicted that most people would respond faster when “prejudice” was paired with “bad.” Finally, with regard to the race-weapons stereotype (RWS) IAT, we predicted that participants would tend to more easily associate Blacks with weapons and/or Whites with tools given that Blacks are stereotypically associated with crime and violence.

More important than the main effects of these variables for the purposes of this study was the variability participants exhibited in implicit associations, and the relations among these associations. First, in a conceptual replication of another Correll et al. (2002) finding, we expected that the RWS would correlate with the Shooter Bias, indicating that the tendency to shoot Black men faster reflects at least in part an association between Blacks and weapons.

Questionnaires assessing motivation to control prejudice should not generally predict unintended behavior. However, Plant and Devine’s Internal Motivation to Respond without Prejudice subscale (IMS) (and the interaction of IMS and EMS) posed some promise to do this, given that it is intended to reflect deeply internalized goals and has been shown to relate negatively to implicit stereotypes. Any negative relation between IMS and Shooter Bias could be

due to lower levels of implicit bias among those high in IMS. However, we hypothesized that neither IMS, EMS, nor the interaction of IMS and EMS would moderate the relation between an implicit stereotype (RWS) and an automatic discriminatory behavior (Shooter Bias). IMCP, on the other hand, representing a truly implicit goal, should be able to short-circuit the effect of implicit anti-Black stereotypes on automatic anti-Black behavior. We expected a weaker relation between RWS and Shooter Bias among those high in IMCP (high in both BOP and NAP) than among those relatively low in IMCP.

## Results and Discussion

Table 1 presents means, standard deviations, and correlations between all measured independent variables in the present study.

### *Computation of IAT Scores*

Following Greenwald and colleagues (1998), we eliminated outliers by replacing latencies under 300 ms and over 3,000 ms with 300 and 3,000 ms, respectively. We then subjected the data to reciprocal transformations. In addition to further normalizing the distribution, this transformation had the effect of converting the latency metric into one of reaction speed wherein higher values reflect faster responses.

Participants' IAT scores were assessed using the size of the effect of test block (conceptually compatible vs. conceptually incompatible) on reaction speeds (Greenwald, Nosek, & Banaji, 2003). The measure of effect size was Cohen's  $d$  (Cohen, 1977). Thus, we subtracted each participant's mean reaction speed in the incompatible block from his or her mean speed in the compatible block, and then divided this difference by the participant's pooled standard deviation. To illustrate, for the IAT assessing NAP, the mean reaction speed in the incompatible

block (*good + prejudiced*) was subtracted from the mean speed in the compatible block (*bad + prejudiced*); this difference was divided by the participant's overall standard deviation of speeds. The resulting effect size reflects the relative ease with which a participant mapped single responses onto category pairs that are compatible with the construct being measured (a higher value reflects a more negative attitude toward prejudice).

#### *Shooter Bias Data Preparation and Computation*

Following Correll and colleagues' (2002) analysis of reaction latencies in the shooter task, we included only correct responses (in which participants fired at armed targets or pulled back for unarmed targets) in the analyses. Participants responded correctly 92.4% of the time. To prepare the shooter data for analysis, we first normalized participants' reaction latencies by (a) discarding latencies shorter than 300 ms or longer than 2,000 ms (resulting in the loss of 4.2% of trials) and reciprocally transforming reaction latencies (thus creating a measure of reaction speed).

#### *Basic IAT Main Effects*

Table 2 provides average reaction latencies and effect sizes in the four IATs. For the BOP IAT, responses in the *me + prejudiced* block were significantly slower than those in the *me + tolerant* block, suggesting that participants tended not to think of themselves as prejudiced. For the NAP IAT, individuals responded significantly more quickly in the *bad + prejudiced* block than in the *bad + tolerant* block, indicating that they had an overall negative attitude toward prejudice. For the RWS IAT, participants responded significantly more quickly in the *Black + weapons* block than in the *White + weapons* block, indicating that they tended to possess an implicit stereotype linking Blacks and weapons.

*Replication of Previous Findings*

Correll and colleagues (2002) found that cultural stereotypes about Blacks moderated Shooter Bias. We first examined whether we succeeded in replicating this effect. Because the shooter task data were nested, with 56 trials per participant, hierarchical linear modeling in HLM 6.0 (Raudenbush, Bryk, Cheong, & Congdon, 2004) was used. We began by constructing a level-1 equation describing individual participants' behavior in the shooter task. In this equation, target race (TR), object type (OT), and their interaction (reflecting the Shooter Bias) predicted reaction speeds. Four level-2 (between-subjects) equations were created, each of which used RWS and Implicit Preference for Whites (IPW) as predictors of one within-subject effect (including the within-subject intercept).

Table 3 summarizes results for the model predicting reaction speed in the shooter task. The interaction of target race by object type, reflecting the Shooter Bias, was not statistically significant in this model. Of greater interest, however, is the effect of the race-weapons stereotype on the interaction term embodying the Shooter Bias. Consistent with Correll et al. (2002), the cross-level interaction between RWS and Shooter Bias was significant. In order to visualize this interaction, we graphed predicted reaction latencies (reconverted from speeds for ease of interpretation) in accordance with procedures articulated by Aiken and West (1991). Figure 1 depicts the predicted magnitude of the Shooter Bias interaction for individuals one *SD* below and one *SD* above the mean on the RWS IAT; these levels reflected a mild reverse stereotype associating Whites with weapons ( $d = -0.15$ ) and a strong stereotype ( $d = 0.83$ ). Individuals possessing a strong stereotype linking Blacks and weapons clearly show the Shooter Bias: They were faster to shoot armed Blacks than armed Whites and slower to refrain from

shooting unarmed Blacks than unarmed Whites. In contrast, individuals possessing a mild *White + weapons* stereotype exhibited the reverse of Shooter Bias.<sup>3</sup>

### *Primary Hypothesis*

Our primary hypothesis was that IMCP would moderate the influence of race-weapons stereotypes on the Shooter Bias, such that individuals high in IMCP—that is, high in both BOP and NAP—would exhibit the weakest association between RWS and Shooter Bias. In order to test this, we constructed a two-level model in which NAP, BOP, RWS, and each of their two- and three-way interactions are allowed to influence the level-1 effects of target race, object type, and the crucial Target Race  $\times$  Object Type (Shooter Bias) interaction. Our hypothesis can be evaluated by examining the influence of the NAP  $\times$  BOP interaction (i.e., IMCP) on the link between RWS and the Shooter Bias. Although statistically tested using a difficult-to-interpret five-way interaction, our hypothesis can be more simply understood as a three-way IMCP  $\times$  RWS  $\times$  Shooter Bias interaction.

Table 4 displays partial results for this model; because testing a five-way interaction involves testing a great many lower-order interactions, only those subsidiary interactions worthy of comment are shown. First, the Shooter Bias interaction was more robust, and marginally significant in this more complex model (perhaps due to the introduction of additional covariates). Second, the influence of RWS on Shooter Bias remained significant. Neither NAP nor BOP alone significantly related to the Shooter Bias. The NAP  $\times$  BOP interaction (IMCP) effect on Shooter Bias was the opposite of what one might expect, reflecting greater Shooter Bias for higher levels of IMCP (when NAP and BOP are high). This effect is only marginally significant, but warrants some consideration. It appears that this is due to the considerably lower levels of Shooter Bias among those who are low NAP, high BOP, and low RWS (see Figure 3, discussed

at greater length below). Being low NAP, they are low in IMCP as operationalized, and are driving the marginally significant relation between IMCP and Shooter Bias.

Turning to the central question of what moderates the link between RWS and Shooter Bias, NAP significantly qualified the influence of the race-weapons stereotype on the Shooter Bias. Finally, consistent with our primary prediction, IMCP (the  $\text{NAP} \times \text{BOP}$  interaction) also significantly moderated the link between RWS and Shooter Bias.

Figure 2 depicts the significant effect of NAP on the RWS-Shooter Bias relation. In the graph, each line represents the predicted effect of RWS on the Shooter Bias for participants exhibiting relatively high or low levels of NAP (i.e., one *SD* above or below the mean); the high NAP line has a slight, nonsignificant positive slope, indicating that for those whose implicit attitude toward prejudice is particularly negative, the strength of their implicit stereotype is not related to the strength of their unintended discriminatory behavior. In contrast, the low NAP line has a steep, significant positive slope, indicating a strong effect of the stereotype on shooter bias.

Figure 3 introduces the role of BOP, depicting the effect of the  $\text{NAP} \times \text{BOP}$  interaction on the RWS-Shooter Bias relation. The high BOP/high NAP line, representing what our theory holds would be the high IMCP group, is the only one that is non-positive, but the negative slope for this group is not statistically significant. Those low in NAP and high in BOP show the strongest, and a significant positive relation between RWS and Shooter Bias.

These results indicate that NAP is sufficient to moderate the effect of implicit stereotypes on automatic behavior. Clearly, BOP is not sufficient—the coefficient for the interaction of BOP and RWS is actually positive, albeit nonsignificant. However, while the HLM analysis reveals that the simple effect of NAP on the RWS-Shooter Bias relation is statistically significant, it appears that this is due largely to the participants who are low in NAP and high in BOP. They

show the strongest positive relation between the implicit race-weapons stereotype and the Shooter Bias. It is possible that those who do not view prejudice disapprovingly (low NAP) but nevertheless perceive themselves as prejudiced (high BOP) are content to allow their stereotypes to guide their behavior. This may also explain the reversed Shooter Bias (greater facility to shoot White targets) among those low NAP/high BOP participants who have weak stereotypes, to the extent that some of our participants had reversed stereotypes. If these are also uninhibited, they should yield reversed Shooter Bias.

While the slightly negative slope for the high BOP/high NAP group provides a hint of support for our original thesis, it is not significant. Furthermore, a post hoc test of the effect of BOP among those high in NAP (comparing the slopes of the high BOP/high NAP and the low BOP/high NAP lines) also yielded a statistically nonsignificant result. However, inspection of Figure 3 and attendant tests of simple effects reveal that the moderating effect of NAP is present only when BOP is high (see solid lines in Figure 3), not when it is low (see dotted lines).

In sum, the effect of NAP on the RWS-Shooter Bias relation, being a simple two-way interaction, is readily interpretable. It is also qualified, however, by the higher order interaction revealing BOP to be relevant as well, but not quite in the manner we originally hypothesized. It is only for those high in BOP that the level of NAP matters, but this appears to be driven by those low in NAP (and therefore not high in IMCP), who show reversed Shooter Bias when their race-weapons stereotypes are weak or reversed.<sup>4</sup>

### *Self-Report Measures of the Motivation to Control Prejudice*

We did not expect direct measures of motivation to control prejudice, such as Plant and Devine's (1998) Internal and External Motivation To Control Prejudice scales (IMS and EMS) to



moderate the effect of an implicit race-weapons stereotype on automatic discriminatory behavioral. In order to examine this, we re-ran the HLM analysis reported above, replacing NAP and BOP with IMS and EMS in the level-2 model.<sup>5</sup> All other model specifications remained the same. Table 5 depicts the relevant results from this analysis. These variables failed to moderate the Shooter Bias. Furthermore, although the effect of RWS on Shooter Bias was not qualified by IMS or the  $IMS \times EMS$  interaction, EMS did moderate the RWS-Shooter Bias relation – high EMS participants exhibited no relationship between stereotypes and Shooter Bias while low EMS participants exhibited a strong positive relation, a pattern resembling that for NAP.

EMS is not significantly correlated with NAP, BOP, or their interaction, so these constructs are not redundant. At this point we can only speculate about the effect of EMS. It is possible that, like those low in NAP, those low in EMS are so unconcerned with being prejudiced that they do not attempt to inhibit their stereotypes on any level and therefore have not automatized that inhibition at all. That NAP and EMS are not correlated is important, because they should represent distinct routes to reduced bias; NAP reflecting motivation derived from the concern with prejudice itself, and EMS derived from concerns about self-presentation. Still, we are hard-pressed to explain how EMS would influence implicit stereotypes. It may be worth considering that EMS was measured after the reaction time measures and its relations with them could reflect some reactivity. We must also consider that the effect of EMS reflects a Type I error, and an *a priori* replication would be useful in this regard.

## Conclusion

Research and theory on automaticity has long held that automatic processes, once triggered, play out inexorably (Bargh, 1999), and early conceptions of implicit racial stereotypes

held that they were universal and inevitable (Devine, 1989). More recent research has suggested some meaningful variability (Blair, 2002; Devine et al., 2002) and opportunities for altering the content of those implicit stereotypes (e.g., Dasgupta & Greenwald, 2001; Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000; Plant & Peruche, 2005). However, to the extent that unintended discriminatory behavior resulting from truly implicit biases is controllable, such control would also have to operate outside of consciousness. We believe that implicit motivation to control prejudice represents such a nonconscious influence. The evidence indicates that those high in an implicit negative attitude toward prejudice can moderate the influence of an implicit stereotype on automatic discrimination. Implicit belief that oneself is prejudiced further moderates this effect, but not in the manner originally hypothesized.

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## Notes

<sup>1</sup>One might reasonably expect that IMCP would predict lower rates of implicit stereotyping because stereotype activation would be inhibited. While we cannot rule this possibility out, and it could serve to undermine the power of our test, it seems more likely that implicit stereotypes would be activated (and therefore measurable) and then inhibited prior to influencing behavior. This may be akin to what Eimer and Schlaghecken (2002) describe as “inhibition following activation” and Maier, Berner, and Pekrun (2003) call “activation dependent inhibition.”

<sup>2</sup>A similar procedure was developed and validated by Greenwald, Oakes, & Hoffman (2003), but the procedure we adopted is closer to that of Correll et al. (2002) and, in fact, employs many of their stimulus photographs, which they generously shared.

<sup>3</sup>Variance in the degree and direction of stereotype endorsement points to one reason for our failure to replicate Correll et al.’s (2002) Shooter Bias. That is, our sample may have held stereotypes linking Blacks and weapons/aggression/danger to a lesser extent than did Correll and colleagues’ participants. In Correll et al. (2002, Study 3), participants one *SD* below the mean on the stereotype measure reported an anti-Black stereotype, whereas similarly low scorers on our RWS IAT evidenced a stronger association between *Whites* and weapons.

<sup>4</sup>In order to test whether the relatively extreme Shooter Bias average for low RWS, low NAP, high BOP was due to a small, volatile group, we grouped subjects according to median splits on RWS, NAP, and BOP, finding the eight groups to have reasonably homogeneous sizes, varying from five to eight participants, with the group of interest having 6 participants.



<sup>5</sup>Similar tests were run for Dunton and Fazio's (1997) MCPR, yielding no significant moderating effects, but Plant and Devine's approach regarding the interaction of IMS and EMS was expected to have greater potential to relate to RWS and Shooter Bias.

Table 1

*Means and standard deviations of, and correlations between, independent variables (N = 48)*

| Variable                   | <i>M</i> | <i>SD</i> | 1 | 2      | 3     | 4      | 5      | 6    | 7     | 8      | 9    | 10    |
|----------------------------|----------|-----------|---|--------|-------|--------|--------|------|-------|--------|------|-------|
| 1. Pro-Black/Anti-Black    | 3.47     | 0.68      | — | .50*** | .38** | -.32*  | .05    | .15  | .40** | .22    | -.16 | .00   |
| 2. Modern Racism           | 2.02     | 0.61      |   | —      | .38** | -.41** | -.18   | .27† | .24   | .23    | .03  | .20   |
| 3. EMS                     | 4.46     | 1.75      |   |        | —     | .19    | .41**  | .09  | .34*  | .05    | -.19 | .00   |
| 4. IMS                     | 7.01     | 1.62      |   |        |       | —      | .55*** | -.21 | -.16  | -.42** | -.04 | -.28† |
| 5. MCPR                    | 4.18     | 0.83      |   |        |       |        | —      | .07  | .31*  | -.34*  | -.14 | -.11  |
| 6. Liberalism-Conservatism | 3.67     | 1.28      |   |        |       |        |        | —    | .06   | .04    | .12  | -.26† |
| 7. IPW IAT                 | 0.83     | 0.65      |   |        |       |        |        |      | —     | -.09   | -.21 | .01   |
| 8. NAP IAT                 | 1.43     | 0.59      |   |        |       |        |        |      |       | —      | .00  | .15   |
| 9. BOP IAT                 | -0.41    | 0.45      |   |        |       |        |        |      |       |        | —    | -.01  |
| 10. RWS IAT                | 0.34     | 0.49      |   |        |       |        |        |      |       |        |      | —     |

*Note.* EMS/IMS = External and Internal Motivation to Respond without Prejudice Scales (Plant & Devine, 1998). MCPR = Motivation to Control Prejudiced Reactions (Dunton & Fazio, 1997). IPW = Implicit Preference for Whites. NAP = Negative Attitude toward Prejudice. BOP = Belief that Oneself is Prejudiced. RWS = Race-Weapons Stereotype. IAT = Implicit Association Test (Greenwald et al., 1998).

\*\*\* $p < .001$ . \*\* $p < .01$ . \* $p < .05$ . † $p < .10$ .

Table 2

*Average Reaction Latency and Effect Size for Each of the IATs Administered in the Study*

| IAT   | IAT block  |              | $t_{\text{diff}}$ | Cohen's $d$  |
|---|------------|--------------|-------------------|--------------|
|   | Compatible | Incompatible |                   |              |
| Belief that Oneself is<br>Prejudiced (BOP)  | 787 (200)  | 685 (144)    | -4.89**           | -0.34 (0.40) |
| Negative Attitude toward<br>Prejudice (NAP) | 567 (141)  | 993 (201)    | 16.83**           | 1.11 (0.45)  |
| Race-Weapons Stereotype<br>(RWS)            | 696 (147)  | 774 (177)    | 3.78**            | 0.28 (0.43)  |
| Implicit Preference for<br>White (IPW)      | 702 (161)  | 878 (194)    | 9.31**            | 0.28 (0.43)  |

*Note.* Values in parentheses are standard deviations. Cohen's  $d$ 's represent average  $d$ 's across participants.

\*\* $p < .01$ .

Table 3

*Hierarchical Linear Modeling Analysis of Reaction Speeds in the Shooter Task and Moderating Role of Implicit Preference for Whites (IPW) and Race-Weapons Stereotype (RWS)*

| Variable  | B     | SE B | <i>df</i> | <i>t</i> |
|---|-------|------|-----------|----------|
| Intercept, $\beta_{00}$                           | 1.47  | 0.04 | 45        | 35.62*** |
| Target Race (TR), $\beta_{10}$                    | 0.02  | 0.01 | 45        | 2.65*    |
| Object Type (OT), $\beta_{20}$                    | 0.21  | 0.02 | 45        | 11.24*** |
| TR $\times$ OT (Shooter Bias), $\beta_{30}$       | 0.01  | 0.01 | 45        | 1.12     |
| Race-Weapons Stereotype (RWS), $\beta_{01}$       | -0.07 | 0.11 | 45        | -0.58    |
| Implicit Preference for White (IPW), $\beta_{02}$ | -0.01 | 0.05 | 45        | -0.13    |
| RWS $\times$ TR, $\beta_{11}$                     | -0.00 | 0.02 | 45        | -0.15    |
| RWS $\times$ OT, $\beta_{21}$                     | 0.03  | 0.05 | 45        | 0.65     |
| RWS $\times$ Shooter Bias, $\beta_{31}$           | 0.07  | 0.03 | 45        | 2.17*    |
| IPW $\times$ TR, $\beta_{12}$                     | -0.01 | 0.01 | 45        | -1.01    |
| IPW $\times$ OT, $\beta_{22}$                     | -0.01 | 0.03 | 45        | -0.51    |
| IPW $\times$ Shooter Bias, $\beta_{32}$           | -0.01 | 0.02 | 45        | -0.54    |

*Note.* Target race is dummy coded such that -1 = White and 1 = Black; object type is coded such that -1 = benign and 1 = gun.

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

Table 4

*Summary of Hierarchical Linear Modeling Analysis for RWS and IMCP Variables  
Predicting Reaction Speeds in the Shooter Task*

| Variable  | B     | SE B | df | t       |
|---|-------|------|----|---------|
| Target Race $\times$ Object Type (Shooter Bias), $\beta_{30}$ | 0.01  | 0.01 | 40 | 1.88†   |
| Negative Attitude toward Prejudice (NAP), $\beta_{01}$        | -0.04 | 0.09 | 40 | -0.47   |
| Belief that Oneself is Prejudiced (BOP), $\beta_{02}$         | 0.08  | 0.08 | 40 | 1.07    |
| Race-Weapons Stereotype (RWS), $\beta_{03}$                   | -0.03 | 0.10 | 40 | -0.32   |
| NAP $\times$ BOP (IMCP), $\beta_{04}$                         | -0.28 | 0.16 | 40 | -1.76†  |
| NAP $\times$ Shooter Bias, $\beta_{31}$                       | 0.02  | 0.01 | 40 | 1.17    |
| BOP $\times$ Shooter Bias, $\beta_{32}$                       | -0.02 | 0.02 | 40 | -1.30   |
| RWS $\times$ Shooter Bias, $\beta_{33}$                       | 0.05  | 0.02 | 40 | 3.03**  |
| IMCP $\times$ Shooter Bias, $\beta_{34}$                      | 0.07  | 0.04 | 40 | 1.88†   |
| NAP $\times$ RWS $\times$ Shooter Bias, $\beta_{35}$          | -0.10 | 0.03 | 40 | -3.39** |
| BOP $\times$ RWS $\times$ Shooter Bias, $\beta_{36}$          | 0.06  | 0.04 | 40 | 1.46    |
| IMCP $\times$ RWS $\times$ Shooter Bias, $\beta_{37}$         | -0.22 | 0.09 | 40 | -2.38*  |

*Note.* Target race is dummy coded such that -1 = White and 1 = Black; object type is coded such that -1 = benign and 1 = gun.

IMCP = Implicit Motivation to Control Prejudice.

\*\* $p < .01$ . \* $p < .05$ . †  $p < .10$ .

Table 5

*Summary of Hierarchical Linear Modeling Analysis for Self-Report Variables and RWS  
Predicting Reaction Speeds in the Shooter Task*

| Variable  | B     | SE B | <i>df</i> | <i>t</i> |
|---|-------|------|-----------|----------|
| Target Race $\times$ Object Type (Shooter Bias), $\beta_{30}$     | 0.01  | 0.01 | 40        | 1.65     |
| IMS, $\beta_{01}$   | -0.03 | 0.03 | 40        | -0.95    |
| EMS, $\beta_{02}$   | 0.01  | 0.02 | 40        | 0.65     |
| Race-Weapons Stereotype (RWS), $\beta_{03}$                       | -0.12 | 0.10 | 40        | -1.23    |
| IMS $\times$ EMS, $\beta_{04}$                                    | 0.03  | 0.02 | 40        | 1.51     |
| IMS $\times$ Shooter Bias, $\beta_{31}$                           | 0.01  | 0.01 | 40        | 1.57     |
| EMS $\times$ Shooter Bias, $\beta_{32}$                           | 0.01  | 0.01 | 40        | 1.14     |
| RWS $\times$ Shooter Bias, $\beta_{33}$                           | 0.06  | 0.02 | 40        | 2.66*    |
| IMS $\times$ EMS $\times$ Shooter Bias, $\beta_{34}$              | -0.01 | 0.01 | 40        | 1.08     |
| IMS $\times$ RWS $\times$ Shooter Bias, $\beta_{35}$              | 0.01  | 0.01 | 40        | 0.50     |
| EMS $\times$ RWS $\times$ Shooter Bias, $\beta_{36}$              | -0.05 | 0.02 | 40        | -2.63*   |
| IMS $\times$ EMS $\times$ RWS $\times$ Shooter Bias, $\beta_{37}$ | 0.00  | 0.01 | 40        | 0.38     |

*Note.* IMS = Internal (Explicit) Motivation to Control Prejudice; EMS = External (Explicit) Motivation to Control Prejudice. Target race is dummy coded such that -1 = White and 1 = Black; object type is coded such that -1 = benign and 1 = gun.

\*\* $p < .01$ . \* $p < .05$ . †  $p < .10$ .

## Figure Captions

*Figure 1.* Reactions latencies in the shooter task as a function of target race (Black vs. White), object type (benign vs. gun), and participants' Race-Weapons Stereotype (RWS; low vs. high).

*Figure 2.* Relation between participants' Race-Weapons Stereotype (RWS) and Shooter Bias among participants low vs. high in Negative Attitude toward Prejudice (NAP).

*Figure 3.* Relation between participants' Race-Weapons Stereotype (RWS) and Shooter Bias for each combination of high and low Belief that Oneself is Prejudiced (BOP) and Negative Attitude toward Prejudice (NAP).







