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Implicit Motivation to Control Prejudice and Exposure to Counterstereotypic Instances Reduce Spontaneous Discriminatory Behavior*

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We examined joint influences of Implicit Motivation to Control Prejudice (IMCP) and exposure to counterstereotypic stimuli on spontaneous racial bias. Participants performed a Shooter Task (Correll, Park, Judd, & Wittenbrink, 2002) wherein the ratios of stereotypic (i.e., armed Black) and counterstereotypic targets were manipulated. Then all participants performed the standard Shooter Task with equal ratios of targets. Those higher in IMCP showed less bias, as did participants in the Counterstereotypic condition. The pattern of results also suggests that the counterstereotypic exemplar effect on Shooter Bias was larger for those relatively high in IMCP.

Keywords: implicit motivation; race and ethnic discrimination; self control; social cognition

Ample empirical evidence indicates that stereotypes and prejudice can and do operate outside of conscious awareness and control, and that they can predict spontaneous forms of discriminatory behavior (e.g., Cunningham, Preacher, & Banaji, 2001; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Greenwald, Poehlman, Uhlmann, & Banaji, 2009). Research has also shown that individual differences in conscious motivation to control prejudice is an influential moderator of expressions of prejudice that are under conscious control (e.g., Dunton & Fazio, 1997; Fazio, Jackson, Dunton, & Williams, 1995; Plant & Devine, 1998). Egalitarian motives also appear to operate implicitly,

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and are uniquely effective in moderating spontaneous forms of bias (Glaser & Knowles, 2008; Park, Glaser, & Knowles, 2008). In the absence of implicit motivation to control prejudice, unintended (i.e., spontaneous) forms of discrimination may be moderated by training exercises (e.g., Kawakami, Dovidio, Moll, Hermsen, & Russin, 2001). In the current study, we examined the impact of an implicit motivation to be egalitarian in the context of being exposed to counterstereotypic exemplars in a computer simulation task.

There is compelling evidence for the implicit operation of goals and motives (e.g., Chartrand & Bargh, 1996; Bargh, Gollwitzer, Lee-Chai, Barndollar, & Troetschel, 2001; Glaser & Banaji, 1999; Glaser & Kihlstrom, 2005; Shah & Kruglanski, 2003). For example, Chartrand and Bargh (1996) nonconsciously primed the goals to memorize or form impressions from person information, which then affected behavior with functional equivalence to explicitly given goals. Shah and Kruglanski (2003) showed that subliminal primes of means to attain goals (e.g., “study”) can activate the very goals (e.g., “being educated”). More relevant to the context of intergroup bias, Moskowitz, Gollwitzer, Wasel, and Schall (1999) demonstrated that a chronic, preconscious goal to be egalitarian can enable one to successfully inhibit the automatic activation of stereotypes. Building on this literature, the construct of Implicit Motivation to Control Prejudice, or IMCP (Glaser & Knowles, 2008; Park, Glaser, & Knowles, 2008) was recently proposed. IMCP is defined as “the internalized, largely nonconscious goal to be egalitarian” (Park, Glaser, & Knowles, 2008, p. 404), which is assumed to differ across individuals. Because of the inherently dynamic nature of motivation, it does not lend itself easily to the associationist operationalizations that cognition and affect do (i.e., object-trait and object-evaluation associations). Accordingly, a procedure was developed (Glaser & Knowles, 2008) that measures and utilizes the mathematical product of two logical antecedents of an implicit motivation to control prejudice: 1) an implicit Negative Attitude toward Prejudice (NAP); and 2) an implicit Belief that Oneself is Prejudiced (BOP). To the extent that one feels implicitly that prejudice is a bad thing and that one is prone to it, IMCP should be especially high. Glaser and Knowles (2008) adapted a computer simulation task by Correll, Park, Judd, and Wittenbrink (2002) called the Shooter Task to measure automatic discriminatory behavior. In the task, participants play the role of a police officer who has to decide quickly whether the individuals appearing on screen are armed or not, and give a response (either shoot or not). The targets (all men) vary on race (Black or White) and whether they carry a gun. Typically, participants show a proclivity to shoot Black targets more readily, which is called Shooter Bias (Correll et al., 2002, 2007; Correll, Park, Judd, Wittenbrink, Sadler, & Keesee, 2007; see also Greenwald, Oakes, & Hoffman, 2003).

IMCP has been found to be an effective mechanism for controlling biased behavior. Glaser and Knowles (2008) found that those who scored relatively high in BOP and NAP (i.e., those who have a strong nonconscious goal to be egalitarian) had a weaker relation between their implicit stereotypes associating Blacks with weapons and the Shooter Bias. This suggested that those high in IMCP were more successful than others in inhibiting their implicit stereotypes from affecting automatic discriminatory behavior. Park, Glaser, and Knowles (2008) found support for the notion that IMCP operates with little or no conscious resources. In their study, those lower in IMCP showed an increase in Shooter Bias when their regulatory resources were depleted. Meanwhile, those higher in

IMCP were less affected by resource depletion and exhibited lower Shooter Bias, apparently maintaining control independent of resources.

What would happen if those high (vs. low) in the implicit motivation to control prejudice are exposed to different proportions of stereotype-consistent and -inconsistent exemplars? According to research on the effects of exposure to counterstereotypic exemplars, people who are exposed to stimuli that are inconsistent with existing stereotypes will unlearn their stereotypic associations (i.e., have the stereotypic associations weakened), so that they will exhibit less bias in a subsequent measurement (e.g., Blair, Ma, & Lenton, 2001; Dasgupta & Greenwald, 2001). Correll, Park, Judd, and Wittenbrink (2007) recently tested the effect of counterstereotypic training with a methodology close to that used in our current study. In that study, building on work by Plant, Peruche, and Butz (2005), Correll et al. (Study 2) gave participants two blocks of the Shooter Task, the first having either more armed Whites (and unarmed Blacks) than armed Blacks (and unarmed Whites) (the "Stereotype Incongruent" condition), or equal rates (the control condition), or more armed Blacks (and unarmed Whites) than armed Whites (and unarmed Blacks) (the "Stereotype Congruent" condition). They then gave participants a second, standard Shooter Task in which the ratios were equal (as in the control condition). They found that participants in the Stereotype Congruent condition showed more Shooter Bias than those in the Stereotype Incongruent condition, although neither experimental condition differed significantly from the control condition. This indicates that the initial phase serves to affect the strength of the stereotypes. However, because they did not find significant differences between the experimental conditions and the control condition, it is unclear from this study that experiencing stereotype incongruent shooter trials will reduce subsequent Shooter Bias.

Correll et al.'s (2007) finding indicates that manipulating the ratio of stereotype consistent versus inconsistent exemplars will affect discriminatory behavior (Shooter Bias). Would this manipulation be moderated by the discrimination-inhibiting effect of IMCP? In other words, would people high and low in IMCP be differentially affected by the counterstereotypic exemplar manipulation? We thought of three possibilities, based on distinct lines of research and reasoning. First, those high in IMCP may show an even larger drop in Shooter Bias. The reasoning behind this possibility is that because those high in IMCP are keen on behaving in egalitarian ways, they may be more sensitive than others to stimuli that challenge social stereotypes and confirm their egalitarian values. Recently, Wyer (2004) reported studies in which participants with low racial prejudice exhibited stereotype *disconfirming* biases in information seeking and attribution. For example (Study 1), she had participants read descriptions of four targets (two stereotype-confirming Black and White men, and two stereotype-disconfirming Black and White men), and asked participants to select one target that they would learn in a subsequent impression formation task. Wyer found that, unlike prejudiced participants, who overwhelmingly preferred stereotype-confirming targets, unprejudiced participants were more likely to choose stereotype-disconfirming targets. This was presumably because those who are unprejudiced would deliberately select information that would challenge the stereotypes and thus help protect their more egalitarian beliefs. If we apply this line of reasoning to our current question, those high in IMCP may undergo more change in their implicit racial stereotypes, and therefore may exhibit a

bigger decline in Shooter Bias. Second, it is also possible that, for those who are motivated to control prejudice, shooting more Whites than Blacks (as in the stereotype incongruent manipulation) could serve as a goal attainment experience and therefore may be experienced as satisfying the goal to be egalitarian. This could, ironically, serve to increase subsequent Shooter Bias. One feature of motivation is that once a goal is satisfied, goal pursuit and its related constructs abates (e.g., Fishbach & Dhar, 2005; Förster, Liberman, and Higgins, 2005). According to this motivational account, those high in IMCP may benefit less than others from exposure to counterstereotypic exemplars, because these exemplars would also work as a means to achieve their goal to avoid bias, which would partially offset the effect brought by the change in association strength. Lastly, a third possibility is simply that change in Shooter Bias after exposure to counterstereotypic exemplars is not contingent on IMCP. If this is true, those high in IMCP will be equally affected by the exposure as others and the two effects will show an additive pattern. The rationale for this possibility is that, since IMCP is about regulating spontaneous biased responses, it may not directly interact with change in automatic stereotype associations, which is arguably a more upstream process.

Overview of the Study

In this study, we examined whether and how performing a Shooter Task with a higher ratio of stereotype inconsistent to consistent targets interacts with IMCP on subsequent spontaneous discriminatory behavior. First, participants' IMCP was measured, and they were randomly assigned to either the Counterstereotypic or Control condition. In the Control condition, participants first engaged in a standard Shooter Task procedure. In the Counterstereotypic (experimental) condition, the first Shooter Task involved more instances of stereotype inconsistent (i.e., unarmed Blacks and armed Whites) than stereotype consistent (i.e., armed Blacks and unarmed Whites) targets. In addition, we employed a stronger manipulation than Correll et al.'s: Their ratio of stereotype inconsistent to consistent targets in the Stereotype Incongruent condition was 5 to 3, but ours was 5 to 1. It was possible our stronger manipulation would yield a significant effect of counterstereotypic exposure, which Correll et al. (2007) did not find.

Following what Correll et al.'s (2007) findings had indicated, we predicted that there would be a main effect of the manipulation: Participants in the Counterstereotypic condition, who were exposed to more instances of stereotype-inconsistent targets, would exhibit less Shooter Bias than those in the Control condition. We also expected to replicate our previous finding of an IMCP main effect on Shooter Bias (Park, Glaser, & Knowles, 2008), such that those with the highest levels (higher products of BOP and NAP scores) would exhibit the least Shooter Bias. As for the interaction of the experimental manipulation and IMCP, there were three possible outcomes, as stated before. First, if those high in IMCP are more sensitive to stereotype-disconfirming stimuli, they would show even more decrease in Shooter Bias than those lower in IMCP. Second, if performing the Shooter Task with more stereotype inconsistent trials serves as goal-satisfying experience for those high in IMCP, they may try less hard to exert control over their bias in the subsequent Shooter Task, such that they would exhibit relatively smaller decrease in Shooter Bias than their low-IMCP counterparts (or even increase). Finally, it was possible that IMCP does not interact with the counterstereotype

manipulation, in which case only the two main effects would be observed. In sum, this study extends Correll et al.'s (2007) research in two important ways: by exploring the possible interaction between counterstereotypic exemplars and IMCP, and by employing a stronger manipulation.

Method

Participants and Design

Sixty three undergraduates (46 females, 1 not reported) taking psychology courses in a public University in the U.S. participated in the experiment in return for credit toward course requirements. Twenty-eight participants were European American, 26 were Asian American, 4 were Latina/Latino, 2 were African American, 2 belonged to other ethnic groups, and one participant did not indicate his/her ethnicity. Since we did not observe any discernable differences between ethnic groups or genders, we collapsed across these groups in all reported analyses.

Materials and Procedure

The experiment was run on computers using Inquisit software (Millisecond Software LLC, 2008). After participants were greeted by a female, White experimenter, they filled out consent forms and started on the experiment. First, participants' BOP and NAP were measured, in that order).[1] Then participants performed the first Shooter Task, which served as the experimental manipulation: In the Control condition, participants were presented with roughly equal numbers of stereotype-consistent (armed Black and unarmed White targets) and stereotype-inconsistent (armed White and unarmed Black) trials; meanwhile, participants in the Counterstereotypic condition were exposed to more stereotype-inconsistent than consistent trials. After this, participants in both conditions performed the second, standard (i.e., equal proportions of Black and White armed and unarmed targets) Shooter Task, with which spontaneous discriminatory behavior was measured. After participants provided their demographic information, they were debriefed and dismissed.

Measuring IMCP. Both BOP and NAP (the two hypothesized components of IMCP) were measured with the Go/No-go Association Task (GNAT: Nosek & Banaji, 2001). The GNAT is similar to the Implicit Association Test (IAT: Greenwald, McGhee, & Schwartz, 1998), with some conceptual and methodological differences. One significant distinction is that it can measure implicit associations between two concepts (e.g. 'me' and 'prejudice') without having to use the opposites of both concepts (e.g. 'not me' and 'tolerance'), so that an association can be more unambiguously interpreted as one between the two concepts of interests, and not one between the opposites of the two concepts. To obtain individual scores for BOP and NAP, we followed the procedures developed in Park et al. (2008), measuring the two associations and calculating the differences: For BOP, we measured *Me-Prejudiced* and *Me-Tolerant* associations (avoiding the use of the unnecessary and confusing "not me" category) and subtracted the latter from the former, yielding an index of the extent to which each participant implicitly associates herself with being prejudiced more than being tolerant. Likewise, NAP was calculated as the difference between *Prejudice-Bad* and *Prejudice-Good* associations (subtracting the

1) We fixed the order of the measures in order to eliminate error variance arising from order effects, thereby optimizing tests of the interrelations of the variables.

latter from the former).

The GNAT tasks were described as being about category judgment, and participants were asked to decide quickly whether each target word, appearing at the center of the screen, belonged to the given categories (e.g., *Me* and *Prejudiced* for BOP) displayed at the top of the screen. Participants pressed the space bar if they thought the target word belonged to either of the given categories, and did not respond (i.e., waited for the trial to lapse) if they thought it did not. After each response, feedback of "O" and "X" was given for correct and incorrect responses, respectively. Each word was presented for 700 ms. See Park et al. (2008) for the lists of stimulus words used.

In each task, participants were first given practice blocks to familiarize themselves with each one of the three focal categories (for BOP: *Prejudiced, Tolerant,* and *Me*; for NAP: *Prejudice*, *Good*, and *Bad*). For each construct there were two data collection blocks, and two categories were paired in each block (e.g., Prejudiced and Me), and the order of the two blocks was randomized. Each practice block had 10 practice trials, and each data collection block consisted of 8 warm-up trials and 60 test trials.

To calculate the implicit associations from the responses, a sensitivity score (d') for each concept pair was computed as the difference between the z-transformed proportions of hits (correct categorizations - hitting the space bar when the target stimulus belonged to one of the specified categories) and false alarms (hitting the space bar when the target stimulus did not belong to the specified categories) (see Nosek & Banaji, 2001, for details). Differences in d' values between the two blocks were obtained to yield BOP and NAP where larger positive values reflect stronger associations between oneself and prejudice (for BOP: i.e., "I am prejudiced"), and negativity and prejudice (for NAP: i.e., "prejudice is bad"). Finally, BOP and NAP scores were multiplied to yield IMCP - the higher one's scores in both BOP and NAP are, the stronger one is assumed to be implicitly motivated to be egalitarian. IMCP score had a mean of -.31 (because BOP tends to be negative and NAP tends to be positive), and a standard deviation of 1.04.

Shooter Task (manipulation block). Participants then performed the first Shooter Task, in which rate of exposure to stereotypic and counterstereotypic exemplars was manipulated. The task itself was largely based on the methodology of, and employed some of the stimuli developed by, Correll et al. (2002), with the adaptations applied by Glaser and Knowles (2008) and Park et al. (2008). In a series of trials, participants made quick decisions whether to "shoot" the targets appearing on screen. Responses were made with a joystick. If a target was armed, the correct response was to squeeze the trigger on the stick. If a target was not armed (holding another object, such as a mobile phone), the correct response was to pull back on the joystick itself (as a motion to hold fire). Targets were either White or Black men.

In each trial, the message "Get Ready!" was presented at the center of the screen for 1500 ms, followed by a background image of a randomly selected setting (e.g., train station, park, or college campus). After a randomly-selected pause of one, two, three, or four seconds, a target (an armed or unarmed, Black or White man) appeared over the background, and participants gave a response (squeeze trigger or pull back), after which the program proceeded to the next trial. Participants first performed a practice block of 10 trials, in which they were given feedback at both trial level (whether each response was correct or incorrect) and block level (if they made more than 3 errors or

if their average response latency exceeded 1000 ms). Then they were administered the manipulation block with 24 trials. In this block, the ratio of stereotype-consistent (i.e. armed Blacks and unarmed Whites) and stereotype-inconsistent (i.e. unarmed Blacks and armed Whites) trials differed in the two conditions: In the Control condition, there were on average[2] equal numbers of the two types of trials, while in the Counterstereotypic condition, the average stereotype consistent-to-inconsistent ratio was 1-to-5. There was no feedback either at trial or block level in the manipulation phase (as well as in the subsequent test phase).

Shooter Task (test phase). After the manipulation phase, participants were administered another Shooter Task, this time with 56 trials. For this test phase, there were, on average, equal numbers of stereotype consistent and inconsistent trials in both conditions.

Shooter Bias scores were computed from responses in the test phase. First, responses that were too fast to reliably reflect meaningful responding (less than 300 ms) or too slow to reliably reflect spontaneous processes (greater than 1,000 ms) were excluded (9.3% of all trials). Incorrect responses (2.0% of remaining trials) were also filtered out. Next, we log-transformed the response latencies to normalize the distribution. Then, for each subject, we created four scores of averaged latencies that correspond to the four combinations of the target characteristics: unarmed Blacks, armed Blacks, unarmed Whites, and armed Whites. Finally, Shooter Bias was calculated as the average of the difference between scores for unarmed targets (score for unarmed Black targets subtracted by score for unarmed White targets) and the difference between scores for armed targets (score for armed White targets subtracted by score for armed Black targets). Higher scores reflect greater Shooter Bias, a proclivity to shoot Blacks and indicate safety for Whites more quickly.

Results

Shooter Bias

The data were inspected and some extreme cases were excluded from the analyses. Two participants were excluded because they had one or more d' scores with negative values in the GNAT, meaning that they had more false alarms than hits. As in Park et al. (2008), five participants were removed because they had negative values of both BOP and NAP: Their IMCP scores, being the product of BOP and NAP scores, would be misleadingly positive even though they are very low on both (for a more detailed rationale for this filtering, see Park et al.,

2) Our original plan was to have exact numbers of trials for stereotype consistent and inconsistent stimuli, but due to a programming error, in both the Control and Counterstereotypic conditions, the ratios were randomly centered around 1-to-1 and 1-to-5, respectively, in the experimental manipulation phase, and 1-to-1 in the test phase. The effect was that the conditions yielded the desired ratio on average, but there was variability within condition. Specifically, in the Control condition, the distribution had a mean of .99, a median of 1.00, and a standard deviation of .39), and the distribution in the Counterstereotypic condition had a mean of .24, a median of .20, and a standard deviation of .10 (One participant in the Control condition was within the range of ratios of the Counterstereotypic condition, and was recoded to be in the Counterstereotypic condition. Results were not affected significantly by this reassignment.). This, no doubt, added error variance to our data and subsequently may have compromised the statistical power of our analyses, raising the probability of Type II errors. We cannot, however, think of a reason that it may have promoted Type I errors or affected construct validity: i.e., the glitch could have only worked against the hypothesis regarding counterstereotypic exemplars, and therefore would underscore the robustness of the observed effect.

2008, footnote 6). Lastly, one participant had more than 15% of trials with unusually large reaction times (greater than 2,000 ms) in the test phase Shooter Task. The exclusion of these participants did not alter the overall pattern of results or statistical significance of effects. The final sample size was 55.

Overall, in the test phase, participants were faster in responding to stereotype consistent (i.e., shooting armed Black targets and not shooting unarmed White targets) than in responding to stereotype inconsistent (i.e., shooting armed White targets and not shooting unarmed Black targets). The mean Shooter Bias score was positive and significantly different from zero, $t(54) = 3.44$, $p < .001$, $d = .46$, replicating the findings in Correll et al. (2002). For the main analysis on the effects of counterstereotypic exemplars, IMCP, and their interaction, we examined the Shooter Bias scores as a function of experiment condition and IMCP. Specifically, Shooter Bias scores were regressed on Condition (effects-coded as -1 = Control condition; 1 = Counterstereotypic condition), IMCP, and their interaction term. First, the effect of Condition was negative, $B = -.01$, $\beta = -.32$, $t(51) = -2.46$, $p = .02$; participants who were exposed to more counterstereotypic exemplars showed less Shooter Bias. This is consistent with Correll et al.'s (2007) findings, with the extension that we have shown a significant reduction in Shooter Bias for those exposed to a high proportion of counterstereotypic stimuli, relative to the control condition. The effect of IMCP was also negative, $B = -.01$, $\beta = -.30$, $t(51) = -2.30$, $p = .03$: The higher the score on our measure of IMCP, the lower the Shooter Bias, indicating greater effectiveness in regulating automatic discriminatory behavior (see Glaser & Knowles, 2008, for more direct evidence of the effect of IMCP on implicit stereotype control).

Finally, the Condition × IMCP interaction effect did not reach statistical significance, $B = -.01$, $\beta = -.17$, $t(51) = -1.35$, $p = .18$, but its negative sign indicates that the bias-reducing effect of IMCP was stronger in the Counterstereotypic condition. Even though the interaction turned out not significant, it may be meaningful to further explore how IMCP differentially predicts Shooter Bias in the two conditions. For this purpose, we regressed Shooter Bias on IMCP in each condition separately. In the Control condition, IMCP had a weak, nonsignificant negative effect, $B = -.01$, $\beta = -.11$, $t(25) = -.57$, $p = .58$; in the Counterstereotypic condition, the effect was much stronger and significant, $B = -.02$, $\beta = -.53$, $t(26) = -3.22$, $p = .003$. Figure 1 shows the projected Shooter Bias scores (transformed back to milliseconds) at one SD below and above the mean score of IMCP, in each condition. In sum, a counterstereotypic Shooter Task experience reduced Shooter Bias in a subsequent test, and this trend was especially pronounced for those high in IMCP, who showed the lowest levels of Shooter Bias. Although the higher order interaction was not statistically significant, this pattern of results suggests that those who are highly implicitly motivated to control prejudice are more sensitive to counterstereotypic stimuli and possibly undergo more attenuation of implicit stereotypes, which is then reflected in a greater decrease of spontaneous discriminatory behavior.

Discussion

The current study replicates and extends findings from two previous lines of research. It demonstrates that the manipulation of stereotypic ratio affects Shooter Bias on a subsequent test, as reported by Correll et al. (2007). While Correll et al. (2007) found higher Shooter Bias among those exposed to a high

armed-Black to armed-White ratio relative to those exposed to a high armed-White to armed-Black ratio, their study did not yield a significant drop in Shooter Bias relative to the neutral control condition. Ours did, probably because of the stronger manipulation (higher ratio) of counterstereotypic experience. The results of the two studies combined suggest a dose-response relationship - the more stark the counterstereotypic experience, perhaps the greater the unlearning. The two studies also jointly indicate that Shooter Bias can be both increased and decreased by fairly brief, recent training. Additionally, we found that participants' measured implicit motivation to control prejudice was negatively related to Shooter Bias. This is consistent with past findings (Park et al., 2008). Combined with a previous study finding that implicit race-weapons stereotypes are a weaker predictor of Shooter Bias among those who score high in IMCP (Glaser & Knowles, 2008), this gives us greater confidence that IMCP, as measured, reflects an ability to effectively control the expression of discriminatory behavior that is largely beyond deliberate control. The present findings reveal that stereotype-driven spontaneous discriminatory behavior can be affected by both situational variations (recent learning) and individual differences (IMCP) simultaneously and additively.

Of additional interest, we observed the suggestive trend of the learning effect being more robust among those high in IMCP. This indicates that IMCP not only serves to inhibit the application of stereotypes, but may also reflect a sensitivity to counterstereotypic information and/or a greater receptiveness to it. To be sure, the interaction did not reach significance, and it has to be further tested whether the trend of interaction observed in the current study holds up with a larger sample. However, the pattern suggests that perception and/or memory involving stimuli related to intergroup bias may be affected by the motivation to be egalitarian. For now, the data at least show that the two have additive effects on Shooter Bias.

The results were not supportive of the motivational account, namely that those high in IMCP will be less effective in controlling their automatic discriminatory behavior after having "attained" their goal to behave without bias. Our methodology was probably not adequate for manipulating attainment of implicit goals, because the act of shooting more Whites (in the experimental condition) was not really a *decision* on the part of the participants, and so may have been inadequate to promote a sense of having pursued and attained a goal. A different methodology that addresses this issue will enable testing the motivational account.

What are the implications of this study's results in Korean society? Of course, it is not easy to find social contexts comparable to the one simulated in this study involving Shooter Bias: There are few stereotypic beliefs of a group being dangerous that are as socially salient as that of African Americans, and violent, armed encounters between the police and criminal suspects take place much more rarely compared to the U.S. In spite of these superficial differences, spontaneous discriminatory behaviors can take place in more subtle situations and in less conspicuous forms such as keeping distances or blinking, as previous studies have shown (e.g., Dovidio et al., 1997). Therefore, it will be meaningful to examine how the effects of implicit stereotypes on spontaneous discrimination can be modified by individual difference variables (e.g., motivations to control prejudice) as well as situational variables (e.g., salient social norms, prior exposure to exemplars). It will be of particular interest to test how IMCP effect can be generalized to other situations and other target groups beyond the

particular context used in this study. For example, IMCP may affect how long people would stare at physically disfigured individuals, or how people manage their nonverbal behaviors when interacting with immigrant workers. In addition, it will also be theoretically and practically important to identify situational factors that can temporarily mitigate or augment IMCP, so that people could be induced to regulate their spontaneous responses more effectively. If Shooter Bias essentially reflects responsiveness toward situational threats as Correll, Wittenbrink, Park, Judd, and Goyle (2011) recently argued, IMCP may work as a powerful factor in regulating various threat-related discriminatory responses.

In conclusion, the present results indicate that counterstereotype exposure can reduce spontaneous discrimination, that IMCP is related to lower spontaneous discrimination, and that IMCP may well dispose individuals to more effective unlearning of biases. The findings also have applied implications, specifically that while counterstereotypic training is effective in reducing automatic discriminatory behavior, the effect may be especially strong when IMCP is high. Therefore, intervention strategies that induce changes in both (e.g., priming an unconscious goal to control bias before exposing people to counterstereotypic exemplars) can be a particularly effective approach for reducing bias in unintended behavior.

References

Bargh, J. A., Gollwitzer, P. M., Lee-Chai, A., Barndollar, K., & Troetschel, R. (2001). The automated will: Nonconscious activation and pursuit of behavioral goals. *Journal of Personality and Social Psychology*, *81*, 1014-1027.

Chartrand, T. L., & Bargh, J. A. (1996). Automatic activation of impression formation and memorization goals: Nonconscious goal priming reproduces effects of explicit task instructions. *Journal of Personality and Social Psychology*, *71*, 464-478.

Correll, J., Park, B., Judd, C. M., & Wittenbrink, B. (2002). The police officer's dilemma: Using ethnicity to disambiguate potentially threatening individuals. *Journal of Personality & Social Psychology*, *83*, 1314-1329.

Correll, J., Park, B., Judd, C. M., & Wittenbrink, B. (2007). The influence of stereotypes on decisions to shoot, *European Journal of Social Psychology*, *37*, 1102-1117.

Correll, J., Park, B., Judd, C., Wittenbrink, B., Sadler, M. S., & Keesee, T. (2007). Across the thin blue line: Police officers and racial bias in the decision to shoot. *Journal of Personality and Social Psychology*, *92*, 1006-1023.

Correll, J., Wittenbrink, B., Park, B., Judd, C. M., & Goyle, A. (2011). Dangerous enough: Moderating racial bias with secondary threat cues. *Journal of Experimental Social Psychology*, *47*, 184-189.

Cunningham, W. A., Preacher, K. J., & Banaji, M. R. (2001). Implicit attitude measures: Consistency, stability, and convergent validity. *Psychological Science*, *12*, 163-170.

Dasgupta, N., & Greenwald, A. G. (2001). On the malleability of automatic attitudes: Combating automatic prejudice with images of admired and disliked individuals. *Journal of Personality and Social Psychology*, *81*, 800-814.

Dovidio, J. F., Kawakami, K., Johnson, C., Johnson, B., & Howard, A. (1997). On the nature of prejudice: Automatic and controlled processes. *Journal of Experimental Social Psychology*, *33*, 510-540.

Dunton, B. C., & Fazio, R. H. (1997). An individual difference measure of motivation to control prejudiced reactions. *Personality and Social Psychology Bulletin*, *23*, 316-326.

Fazio, R. H., Jackson, J. R., Dunton, B. C., & Williams, C. J. (1995). Variability in automatic activation as an unobstrusive measure of racial attitudes: A bona fide pipeline? *Journal of Personality and Social Psychology*, *69*, 1013-1027.

Fishbach, A., & Dhar, R. (2005). Goals as excuses or guides: The liberating effect of perceived goal progress on choice. *Journal of Consumer Research*, *32*, 370-377.

Förster, J., Liberman, N., & Higgins, E.T. (2005). Accessibility from active and fulfilled goals. *Journal of Experimental Social Psychology*, *41*, 220-239.

Glaser, J., & Banaji, M. R. (1999). When fair is foul and foul is fair: Reverse priming in automatic evaluation. *Journal of Personality and Social Psychology*, *77*, 669-687.

Glaser, J., & Kihlstrom, J. F. (2005). Compensatory automaticity: Unconscious volition is not an oxymoron. In R. Hassin, J. S. Uleman, & J. A. Bargh (Eds.), *The New Unconscious*. New York: Oxford University Press.

Glaser, J., & Knowles, E. D. (2008). Implicit motivation to control prejudice. *Journal of Experimental Social Psychology*, *44*, 164 - 172.

Moskowitz, G. B., Gollwitzer, P. M., Wasel, W., & Schaal, B. (1999). Preconscious control of stereotype activation through chronic egalitarian goals. *Journal of Personality and Social Psychology*, *77*, 167-184.

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

Greenwald, A. G., Oakes, M. A., & Hoffman, H. (2003). Targets of discrimination: Effects of race on responses to weapons holders. *Journal of Experimental Social Psychology*, *39*, 399-405.

Greenwald, A.G., Poehlman, T. A., Uhlmann, E., & Banaji, M.R. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality & Social Psychology, 97*, 17-41.

Inquisit 3.0.3.0 [Computer software]. (2008). Seattle, WA: Millisecond Software LLC.

Kawakami, K., Dovidio, J. F., Moll, J., Hermsen, S., & Russin, A. (2001). Just say no (to stereotyping): Effects of training in the negation of stereotypic associations on stereotype activation. *Journal of Personality & Social Psychology*, *78*, 871-888.

Nosek, B. A., & Banaji, M. R. (2001). The go/no-go association task. *Social Cognition*, *19*, 161-176.

Park, S., Glaser, J., & Knowles, E. D. (2008). Implicit Motivation to Control Prejudice moderates the effect of cognitive depletion on unintended discrimination. *Social Cognition, 26*, 379-398.

Plant, E. A., & Devine, P. G. (1998). Internal and external motivation to respond without prejudice. *Journal of Personality and Social Psychology*, *75*, 811-832.

Plant, E. A., Peruche, B. M., & Butz, D. A. (2005). Reducing implicit racial stereotyping: Making race irrelevant. *Journal of Experimental Social Psychology*, *41*, 141-156.

Shah, J. Y., & Kruglanski, A. W. (2003). When opportunity knocks: Bottom-up priming of goals by means and its effects on self-regulation. *Journal of Personality and Social Psychology*, *84*, 1109-1122.

Snyder, M., & Swann, W. B. Jr. (1978).

Hypothesis-testing processes in social interaction. *Journal of Personality and Social Psychology*, *36*, 1202-1212.

Wyer, N. A. (2004). Not all stereotypic biases are created equal: Evidence for a stereotype disconfirmation bias. *Personality and Social Psychology Bulletin*, *30*, 706-720.

Appendix

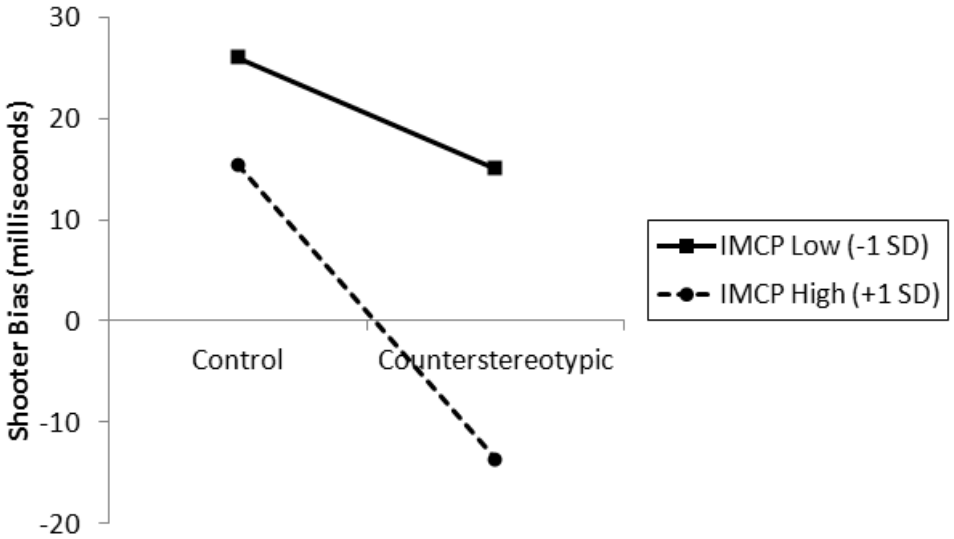

Figure 1. Shooter Bias as a function of IMCP and Stereotype Consistency Condition.

Note. Larger positive scores reflect stronger Shooter Bias, i.e., faster to shoot armed Black targets and to not shoot unarmed White targets than to shoot armed White targets and not shoot unarmed Black targets.

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편견 통제를 위한 암묵적 동기와 반고정관념적 사례에의 노출이 자발적 차별 행동에 미치는 영향

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이 연구에서는 편견 통제를 위한 암묵적 동기(IMCP)와 반고정관념적 자극이 자발적 인종 편향에 미치는 영향을 살펴보았다. 실험참가자들은 두 번의 슈터 과제(Correll, Park, Judd, & Wittenbrink, 2002)를 수행했다. 첫 과제에서는 고정관념과 일치하는 표적(무기를 든 흑인 등)과 고정관념과 불일치하는 표적의 비율이 조작되었다. 이후 실험참가자들은 표적의 비율이 동등한 표준 슈터 과제를 수행하였다. IMCP 점수가 높은 실험참가자들과 반고정관념 조건의 실험참가자들은 편향을 더 적게 보였다. 또한 반고정관념적 사례의 슈터 편향에의 효과는 IMCP 점수가 높을수록 더 커지는 패턴을 보였다.

주요어: 암묵적 동기, 인종 차별, 자기 통제, 사회 인지

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