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Header: Perspective-Taking, Judgment, and Behavior

Perception through a Perspective-Taking Lens:  
Differential Effects on Judgment and Behavior

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## Abstract

In contrast to the view that social perception has symmetric effects on judgments and behavior, the current research explored whether perspective-taking leads stereotypes to differentially affect judgments and behavior. Across three studies, perspective-takers consistently used stereotypes more in their own behavior while simultaneously using them less in their judgments of others. After writing about an African American, perspective-taking tendencies were positively correlated with aggressive behavior but negatively correlated with judging others as aggressive. Similarly, after writing about an elderly man, perspective-takers walked more slowly and became more conservative, but judged others as less dependent. These divergent effects of perspective-taking on judgment and behavior occurred regardless of whether perspective-taking was manipulated or measured, whether judgments were measured before or after behavior, the stereotype that was activated, and participants' culture (American, Singaporean). These findings support theorizing that judgments and behavior can diverge when individuals' social strategies are geared towards establishing and maintaining social bonds, as well as provide insight into how perspective-taking helps individuals manage diversity.

Perception through a Perspective-Taking Lens:  
Differential Effects on Judgment and Behavior

Thinking is for doing; perceiving is for acting. This notion – that social perception is inexorably tied to social judgment and behavior – is at the heart of classic and contemporary views in psychology (Fiske, 1992; James, 1890). A range of research has established that the tendency for merely thinking about a behavior increases the likelihood of seeing that behavior in others and engaging in that behavior oneself (Bargh, 1997; Bargh, Chen, & Burrows, 1996; Bargh & Ferguson, 2000; Dijksterhuis & Bargh, 2001; Dijksterhuis & van Knippenberg, 1998; Higgins, 1996). For instance, activating trait or semantic constructs through priming leads individuals both to perceive that trait in others and to act in ways consistent with that trait (Bargh, et al., 1996; Dijksterhuis & Bargh, 2001; Higgins, 1996). The consistency of these effects suggests that perception has directionally similar effects on judgment and behavior (Dijksterhuis & Bargh, 2001; Higgins, 1996).

Similarly, research has repeatedly found consistent effects of stereotype activation on social judgment and behavior. As just two examples, being exposed to the elderly stereotype leads people to judge others as more dependent (Galinsky & Moskowitz, 2000) and to walk more slowly (Bargh, et al., 1996), whereas activating the African-American stereotype leads individuals to see more hostility in others (Devine, 1989) and to act more aggressively (Bargh, et al., 1996). Stereotypes are so well ingrained in the mind that their mere activation leads to consistently strong and parallel effects on judgment and behavior (Wheeler & Petty, 2001). Thus, a multitude of research has demonstrated that we perceive, not as mere instruments of contemplation, but both in the service of judging and acting, resulting in symmetric effects of perception on judgment and behavior.

In the present research, we propose that an individual's current strategies for navigating his or her social world can lead perception to have different effects on judgment and behavior. Specifically, we explore whether perspective-taking, which is geared towards achieving social success and maintaining social bonds (Galinsky, Ku, & Wang, 2005), leads individuals to simultaneously judge others less stereotypically and behave more stereotypically themselves. We test these simultaneous and divergent effects of stereotypes on judgment and behavior in three studies, using both measures and manipulations of perspective-taking, two different stereotypes, and participants from both Western and Eastern cultures.

#### *Differential Effects of Perception on Judgment and Behavior*

Although the majority of research suggests that perception has symmetric effects on social judgment and behavior (Dijksterhuis & Bargh, 2001; Higgins, 1996), some research suggests that perception can produce opposing effects on judgments and behavior. For instance, Mussweiler & Förster (2000) argued that when perceptual and behavioral experiences diverge, judgments and behaviors may also diverge. They found that men and women differentially experience the connection between sex and aggression despite the fact that both men and women show the same basic link between sex and aggression at the semantic level. Women, who are more vulnerable to sexual assault, are more likely to have repeatedly perceived sexual behavior with regard to its aggressiveness, and are therefore likely to develop an automatic link between sex and aggression at the judgmental level. Men, on the other hand, are more likely than women to have engaged in aggressive behavior in sexual situations and are therefore more likely to store the association between sex and aggression at the behavioral level. The authors found that when primed with sex, men behaved more aggressively towards a woman, but women perceived more aggressiveness in men's behavior.

We contend that judgments and behavior can diverge, not only from different experiences, but also from the strategies that individuals use to navigate their social worlds. In the current research, we offer evidence that perspective-taking, a strategy used to manage diversity (Galinsky, et al., 2005), can lead perception to have different effects on judgment and behavior. Specifically, we explore whether perspective-takers judge others less stereotypically while behaving more stereotypically.

*Perspective-Taking: Differential Effects on Judgments and Behavior*

From cognitive development (Piaget, 1932) to moral reasoning (Kohlberg, 1976), perspective-taking – the process of imagining the world from another’s vantage point or imagining oneself in another’s shoes – is considered the foundation of human social capacity (Mead, 1934) and is recognized as a critical ingredient in proper social functioning (Davis, 1983). Perspective-taking consistently increases liking (Davis, Conklin, Smith, & Luce, 1996), behavioral mimicry (Chartrand & Bargh, 1999; Galinsky, Wang, & Ku, 2008), and helping behavior (Batson, 1991; Dovidio, Allen, & Schroeder, 1990). Perspective-taking increases interaction satisfaction: candidates report higher satisfaction with the negotiation process with a perspective-taking recruiter (Galinsky, Maddux, Gilin, & White, 2008) and patients report higher satisfaction in medical encounters with perspective-taking doctors (Blatt, LeLacheur, Galinsky, Simmens, & Greenberg, in press). A wealth of research has also shown that perspective-taking affects intergroup judgments by decreasing stereotyping, prejudice, and intergroup bias towards the target and the target’s group (Batson, Early, & Salvarani, 1997; Batson, Polycarpou, et al., 1997; Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000; Vescio, Sechrist, & Paolucci, 2003).

Galinsky et al. (2005) argued that perspective-taking is a social strategy that facilitates the fundamental human motivation of creating and maintaining bonds. Because perspective-

taking is geared towards social success, it allows perspective-takers to judge others less stereotypically while behaving more stereotypically. In line with this theorizing, other researchers have shown that motivation to connect with others moderates behavioral priming effects (Cesario, Plaks, & Higgins, 2006; Dijksterhuis, Aarts, Bargh, & van Knippenberg, 2000; Wheeler, DeMarree, & Petty, 2005, 2007). For example, Cesario et al. (2006) found that behavioral priming effects only occurred for individuals with positive attitudes toward the social group. However, Cecario et al. were silent on the implications of attitudes for judgmental priming effects.

We turn to perspective-takers' goal of creating and maintaining social bonds to understand how this strategy for managing diversity can both decrease stereotyping of others while simultaneously increasing the stereotypicality of one's own behavior. Galinsky et al. (2005) argued that the full range of perspective-taking effects are explained by increased self-other overlap in cognitive representations: perspective-takers see more of themselves in others *and* more of others in themselves. As a result of this reciprocal self-other merging, perspective-takers are better able to coordinate their behavior with others, to achieve successful social interactions, and to build and maintain social relationships.

Research has consistently shown that, as perspective-takers actively put themselves into the other's situation, they see more of themselves in the other (Davis, et al., 1996). That is, the self is applied to the other and the other becomes more "self-like". In fact, seeing more of oneself in others mediates the relationships between perspective-taking and decreased stereotyping (Galinsky & Moskowitz, 2000) and increased helping (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997). To demonstrate the mediating role of applying the self to the other on stereotype reduction, Galinsky and Moskowitz (2000) had participants rate themselves on 90 traits before



writing about a day in the life of an elderly man (either by taking the man's perspective, by suppressing elderly stereotypes, or with no further instructions). Finally, participants rated the elderly on the same 90 traits, five of which were stereotypical of the elderly. Perspective-takers rated the elderly less stereotypically than other participants. Additionally, perspective-takers showed greater overlap in self and elderly ratings on the other 85 traits, that is, the absolute difference between self ratings and elderly ratings was smaller than in the other two conditions. Finally, controlling for the level of self-other overlap eliminated the effect of perspective-taking on stereotyping. Thus, by applying the self to the other, perspective-taking resulted in less stereotyping, which should have facilitated interacting with as well as creating and maintaining social bonds with an elderly individual.

Research has also shown that the other is included in the self during perspective-taking, with the self becoming more "other-like". As a result, perspective-takers are more likely to rate targets' positive and negative stereotypic traits as more self-descriptive (Galinsky, Wang, et al., 2008) and to mimic others (Chartrand & Bargh, 1999; Galinsky, Wang, et al., 2008). Indeed, including the stereotype in the self mediates the effects of perspective-taking on behavior (Galinsky, Wang, et al., 2008). For instance, after writing about a day in the life of a cheerleader (a stereotypically unintelligent target), perspective-taking tendencies were negatively correlated with both intelligence self ratings and performance on an analytical task. In fact, the decrease in intelligence self ratings mediated the effects of perspective-taking on decreased analytical performance. Thus, by taking the cheerleader's perspective, the perspective-taker became more other-like: the cheerleader's stereotypical lack of intelligence was included in the self, resulting in poorer performance on the analytical task (Galinsky, Wang, et al., 2008). This decreased

analytical focus should have increased the perspective-taker's ability to seamlessly chatter with a cheerleader, smoothing the cogs of social interaction.

This bi-directional self-other merging holds the key to why perspective-taking may lead perception to have differential effects on judgment and behavior. When the processes of applying the self to the other and other to the self are considered simultaneously, we see that the former decreases stereotyping (Galinsky & Moskowitz, 2000), whereas the latter increases behavioral mimicry and social coordination (Chartrand & Bargh, 1999; Galinsky, Wang, et al., 2008).

The current research empirically explores if perspective-taking *simultaneously* reduces stereotypical judgments while increasing stereotypical behavior. Although research has demonstrated these effects separately, presenting these divergent findings of perspective-taking on judgments and behavior simultaneously would be a counterintuitive finding given the plethora of research showing that judgment and behavior typically go hand in hand. The simultaneous occurrence of these divergent effects would also provide a strong test for our functional theory of perspective-taking, suggesting that perspective-takers are applying their self-concepts to others to reduce stereotyping, while including the other in the self to increase social coordination, both of which facilitate social interactions and allow for the creation and preservation of social bonds (Galinsky, et al., 2005).

#### *Overview*

We predicted that perspective-taking would moderate the effects of perception on judgment and behavior, with perspective-taking increasing the use of the stereotypes in behavior but decreasing their use in judgments. In the first study, after writing about an African-American male, we predicted that perspective-taking tendencies would be positively correlated with aggressive behavior (greater use of the stereotype in behavior), but negatively correlated with

seeing others as aggressive (reduced use of the stereotype in judgments of others). In the second and third studies, which used the elderly stereotype and manipulated perspective-taking, we expected perspective-takers to become more conservative and to walk more slowly (behaviors stereotypic of the elderly), while seeing others as less dependent (a trait stereotypic of the elderly).

### Study 1

In Study 1, we measured perspective-taking tendencies and had participants write about a day in the life of an African-American male, play a Prisoner's Dilemma Game (PDG), and rate a target who was ambiguously aggressive. As with all PDGs, there was a tension between cooperation and competition. In line with the African-American stereotype (Devine, 1989), we predicted that perspective-taking would lead participants to behave aggressively, resulting in a positive correlation between perspective-taking tendencies and competing in the PDG. We purposely used the African-American's stereotypic aggressiveness and a PDG as a conservative test of our hypothesis because previous research has found that perspective-taking increases cooperation in PDGs (Batson & Ahmad, 2001; Batson & Moran, 1999). We also predicted that perspective-taking would lead participants to be less likely to use the African-American stereotype in their judgments, resulting in a negative correlation between perspective-taking tendencies and aggressive judgments.

### *Method*

#### *Participants*

Thirty-two undergraduates (13 men and 19 women) from Northwestern University were tested individually and paid \$10.

#### *Procedure*

Participants were told that they would engage in a number of unrelated tasks. Following the procedures of Galinsky and colleagues (Galinsky & Moskowitz, 2000; Galinsky, Wang, et al., 2008), participants were first shown a black and white photograph of an African-American male and were asked to write a typical day in his life. Specifically, to ensure that instructions were neutral and to allow natural variations in our individual difference measure of perspective-taking tendencies to have an effect, participants were instructed to: “Try to be as objective as possible when imagining what is happening to this person and what their day is like. Don’t get caught up in imagining what this person has been through or how the person feels.”

*Behaving Aggressively.* Participants next played a computer-based PDG, described as an advertising task (Greenhalgh & Bazerman, 2004). Participants decided whether to embark on an advertising campaign disparaging their competitor’s product. They were told, “Maximize your firm’s profit over the next several sales periods. This is also the objective of the other firm’s product manager. The profitability of your product depends not only on the decision you make, but also on the decision the other product manager makes.” Advertising was equivalent to an aggressive, competitive response, whereas not advertising was equivalent to cooperating. The case outlined a classic PDG payoff matrix in which both parties received \$1 million profit if they both did not advertise, both received a \$1 million loss if they both advertised, and if one person advertised but the other did not, the advertiser would receive \$2 million in profit while the other party would lose \$2 million. After reading the case, participants were told that they were linked over the computer with another participant (playing the role of the competitor) and made their advertising decision. Participants only made one decision, though they thought they would be making multiple decisions of whether or not to advertise.

*Judging Aggressiveness.* While participants ostensibly waited for their opponent to make their first advertising decision, they completed a short task that was described as a pretest for a separate study. We adapted a paragraph from Erdley and D'Agostino (1988) in which the main character, Donald, was moderately hostile. Participants were asked to read the vignette and rate how aggressive Donald was using an 11-point scale, anchored at (0) "not at all" and (10) "extremely".

*Perspective-taking tendencies.* After a number of other filler tasks, participants completed the seven-item perspective-taking subscale of Davis's (1980) Interpersonal Reactivity Index (IRI) (e.g., "I sometimes try to understand my friends better by imagining how things look from their perspective"). All items were rated on a 5-point scale, anchored at (0) "does not describe me well" and (4) "describes me very well". Responses to these items were averaged, which gave us a single score for each participant's perspective-taking tendencies ( $\alpha = .73$ ).

After completing the scale, participants were thoroughly debriefed and paid; none noticed a connection between the various tasks.<sup>1</sup>

### Results

We predicted that, after writing about the day in the life of an African-American male, perspective-taking tendencies would be positively related to aggressive behavior and negatively related to aggressive judgments. Consistent with our hypotheses, perspective-taking tendencies were positively correlated with competing in the PDG,  $r = .42$ ,  $p = .016$ , and negatively correlated with judgments of Donald's aggressiveness,  $r = -.31$ ,  $p = .089$ , although the latter effect was marginally significant.

All participants were exposed to the same stimuli under the same conditions, with natural variations in perspective-taking tendencies predicting whether participants behaved and judged

others stereotypically. In contrast to previous findings showing symmetric effects of perception on stereotypical judgments and behavior, perspective-taking tendencies increased stereotypical behavior while decreasing the use of the stereotype judgmentally. It should be noted that our objective instructions for writing about the African-American target might have inhibited perspective-taking. Regardless, natural variations in perspective-taking tendencies did emerge and Study 1's results are consistent with our hypotheses. To alleviate any concerns over these instructions or the correlational nature of the first study, Study 2 manipulated rather than measured perspective-taking.

### Study 2

Study 2 sought to replicate the differential effects of perspective-taking on judgments and behavior by manipulating rather than measuring perspective-taking. Additionally, Study 2 used a different stereotype (the elderly) and participants from Singapore, a country with a more interdependent and collectivistic culture than the United States (Soh & Leong, 2002). Participants took the perspective of an elderly man, expressed their level of conservatism, and rated an ambiguously dependent individual. We chose to use a measure of conservatism as our behavior because Kawakami, Dovidio, and Dijksterhuis (2003) have shown that conservatism is associated with the elderly stereotype and priming the elderly stereotype leads people to become more conservative. We predicted that, compared to participants who were instructed to be as objective as possible, perspective-takers would express more conservative views, in line with the elderly stereotype, but would judge an ambiguously dependent individual as less dependent, counter to the elderly stereotype (Brewer, Dull, & Lui, 1981; Galinsky & Moskowitz, 2000).

### *Method*

#### *Participants and Design*

Thirty-one undergraduates (16 men and 15 women) from the National University of Singapore participated for course credit. We used a 2 (condition: perspective-taking vs. objective) x 2 (measure: judgment vs. behavior) mixed design with repeated measures on the second factor.

### *Procedure*

As in Study 1, participants first completed the narrative essay writing task, composing a story about the day in the life of an elderly man sitting on a bench. Half of the participants received Study 1's instructions where they were asked to write about the elderly man in an *objective* manner. The other half of the participants wrote about the elderly man with *perspective-taking* instructions (Galinsky & Moskowitz, 2000): "Take the perspective of the individual in the photograph and imagine a day in the life of this individual as if you were that person, looking at the world through his eyes and walking through the world in his shoes." Participants were next told they would complete several pretests for a separate study.

*Behaving conservatively.* Using a 10-point scale anchored at (1) "totally disagree" and (10) "totally agree", participants expressed their conservatism by indicating their views on seven socially-sensitive issues (e.g., "Marriage should only be between a man and a woman"), some of which were reverse-coded ( $\alpha = .79$ ). These items were adapted from Kawakami et al. (2003).

*Judging dependency.* Next, participants read a vignette about a woman named Donna who performs a series of ambiguously dependent behaviors (adapted from Banaji, Hardin, & Rothman, 1993) and rated Donna's level of dependence using a 10-point scale, anchored at (1) "not at all dependent" and (10) "very dependent".

After completing the scale, participants were thoroughly debriefed; none recognized a connection between the various tasks.

### Results

We predicted that perspective-takers would use the elderly stereotype more in their own behavior by expressing more conservative attitudes, but would use the stereotype less when judging Donna's dependence. The conservative attitudes and the dependence ratings were submitted to a 2 (condition: perspective-taking vs. objective) x 2 (measure: judgment vs. behavior) mixed-model ANOVA with repeated measures on the second factor. The condition x measure interaction was significant,  $F(1, 29) = 9.06, p = .005, \eta^2 = .24$ , demonstrating that perspective-taking had opposing effects on judgments and behaviors.

*Behaving conservatively.* Perspective-takers ( $M = 5.28, SD = 1.39$ ) expressed more conservative attitudes compared to objective participants ( $M = 4.22, SD = 1.42$ ),  $t(29) = 2.08, p = .047, d = .75$ .

*Judging dependency.* Perspective-takers ( $M = 6.12, SD = 1.90$ ) rated Donna as marginally less dependent compared to objective participants ( $M = 7.21, SD = 1.72$ ),  $t(29) = 1.67, p = .106, d = .60$ .

Consistent with Study 1's results, perspective-takers in Study 2 expressed attitudes stereotypic of the elderly while stereotyping less in their judgments. These simultaneous and opposing effects of perspective-taking are noteworthy given the typical symmetric effects of perception on judgment and behavior.

### Study 3

Having shown in Study 2 that perspective-takers take on the elderly stereotype and express more conservative attitudes, Study 3 tested whether the elderly stereotype could influence overt behavior in terms of walking speed. In Studies 1 and 2, the behavioral measure occurred before the judgments of others. To ensure that there are no order effects, we switched



the order of judgment and behavior in Study 3. Whereas Study 2 used objective instructions as the comparison condition, Study 3 included a suppression condition to show that perspective-taking is unique in producing less stereotypical judgments but more stereotypical behavior. We added this condition because previous research has often compared the effects of perspective-taking to those of suppression (Galinsky & Moskowitz, 2000; Galinsky, Wang, et al., 2008).

As in Study 2, we expected perspective-takers to be less likely to use the elderly stereotype in their judgments. However, we expected perspective-takers to use the stereotype in their behavior, walking more slowly down the hallway.

#### *Method*

##### *Participants and Design*

Participants were 30 Northwestern undergraduates (11 men, 17 women, and 2 missing responses) who were tested individually and paid \$10 for their time. We used a 3 (condition: perspective-taking vs. objective vs. suppression) x 2 (measure: judgment vs. behavior) mixed design with repeated measures on the second factor.

##### *Procedure*

The procedure was similar to those of Studies 1 and 2 except participants were run one at a time. Because participants would be timed walking to the exit, all participants were brought to the same room and were explicitly informed of the path between the main reception area and their room.

Participants were first shown the same photograph of the elderly individual from Study 2 and were asked to write a narrative about a day in his life under *perspective-taking*, *objective*, or *suppression* manipulations. The first two conditions utilized the same instructions as in Study 2. In the *suppression* condition, participants were told: “Previous research has noted that our

impressions and evaluations of others are consistently biased by stereotypic preconceptions.

When constructing the passage you should actively try to avoid thinking about the photographed individual in such a manner.”

*Judging dependency.* Participants next read Study 2’s vignette on Donna and rated Donna’s dependence using a 10-point scale, anchored at (1) “not at all dependent” and (10) “very dependent”.

*Walking speed.* Finally, the experimenter informed participants that they needed to walk back to the main reception area. Following the procedure adapted from Bargh et al. (1996), the experimenter (who was blind to condition and hypotheses) timed participants walking from the breakout room to the exit door, which was about 10 meters in length.

Afterwards, the experimenter caught up with participants to debrief, pay, and thank them; participants were thoroughly probed for suspicion and none recognized a connection between the various tasks.

### *Results*

We predicted that perspective-takers would use the elderly stereotype to guide their behavior, walking more slowly down the hallway, but would not use the stereotype when judging Donna’s dependence. Because walking speed and the dependence ratings were on different units of measurement (seconds and scale ratings), we standardized each measure into z-scores. The z-scores were submitted to a 3 (condition: perspective-taking vs. objective vs. suppression) x 2 (measure: judgment vs. behavior) mixed-model ANOVA with repeated measures on the second factor. The condition x measure interaction was the only significant effect,  $F(2, 26) = 6.44, p = .005, \eta^2 = .31$ , demonstrating that the experimental manipulations had different effects on judgments and behaviors.

*Judging dependency.* As predicted, contrast analyses showed that perspective-takers ( $M = 6.67$ ,  $SD = 1.87$ ) judged Donna to be less dependent than did suppressors ( $M = 8.33$ ,  $SD = 2.18$ ) and those in the objective condition ( $M = 8.45$ ,  $SD = 1.21$ ),  $t(27) = 2.44$ ,  $p = .02$ ,  $d = .94$  (see Figure 1).

*Walking speed.* Contrast analyses showed that perspective-takers ( $M_{seconds} = 10.75$ ,  $SD = 1.12$ ) walked more slowly down the hallway than suppressors ( $M_{seconds} = 9.75$ ,  $SD = .97$ ) and those in the objective condition ( $M_{seconds} = 9.86$ ,  $SD = 1.1$ ),  $t(27) = 2.23$ ,  $p = .04$ ,  $d = .86$  (see Figure 2).

Replicating the findings in Studies 1 and 2, perspective-taking led to different effects on judgment and behavior. After writing about an elderly male, perspective-takers walked more slowly, demonstrating a greater use of the stereotype in behavior. However, they simultaneously showed less evidence of using the stereotype in their judgments, judging Donna as less dependent.

### *General Discussion*

Three studies found that perspective-taking consistently moderated the effects of perception on judgments and behavior. In contrast to previous research showing that perception has symmetrical effects on judgment and behavior, the current results show that stereotypic targets affected the judgments and behavior of perspective-takers in opposite directions. Indeed, a meta-analysis that tested the overall effect sizes across the three studies (see Table 1) showed that these divergent effects were reliable. Regardless of whether perspective-taking was manipulated or measured, whether judgments were measured before or after behavior, the comparison conditions used, the stereotype involved, or the participant population, perspective-takers used stereotypes more in their own behavior but less in their judgments of others. The

current research has demonstrated for the first time that these opposing effects of perception on judgment and behavior occur *simultaneously* for perspective-takers.

#### *When and How do Judgments and Behavior Diverge?*

The differential effects of perspective-taking on judgments and behavior are remarkable because research has generally found symmetric effects of perception on judgment and behavior. Instead, our data support theorizing that there are different schemas for interpreting versus producing behavior, with individuals using interpretive schemas for understanding and judging behaviors and behavioral schemas for producing behaviors. For instance, Buytendijk (1922) has claimed that perception and action are independent of each other. Similarly, Carver, Ganellen, Froming, and Chambers (1983) suggested that individuals use interpretive schemas for understanding behaviors, but behavioral schemas for producing manifest behavior. When individuals have different perceptual and behavioral experiences (Mussweiler & Förster, 2000) or, in line with our theorizing, when they have specific strategies for navigating the interpersonal landscape (e.g., perspective-taking), perception no longer needs to have symmetric effects on judgment and behavior.

These differential effects of perception on judgment and behavior may also have neurobiological bases. For example, the same visual stimulus can have differential effects on judgment and behavior because perception and visual-motor control correspond to different neural systems and are connected to different phenomenological experiences (Milner & Goodale, 1995). Whereas the dorsal stream of the visual system results in “vision-for-action,” the ventral stream results in “vision-for-perception” (Milner & Goodale, 1995), a finding supported by neuroimaging experiments, single cell recordings, experimental interventions involving

monkeys, and psychophysical experiments involving normal human participants (see Clark, 2001; Goodale & Westwood, 2004 for reviews).

*The Important Role of Social Bonds and Implications for Diversity*

The present research provides strong evidence that the effects of perspective-taking are geared towards creating and maintaining social bonds and increasing social coordination (Galinsky, et al., 2005). In particular, we suggest that perspective-taking relies on increased self-other overlap, which is the result of two separate and empirically established processes (Galinsky & Moskowitz, 2000; Galinsky, Wang, et al., 2008). First, the self is applied to the other, so that the other becomes more “self-like”. This application of the self to the other creates psychological connections and decreases prejudice and stereotyping (Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000), which aids in the creation of social bonds with diverse others. Second, the other is also included in the self, with the self becoming more “other-like”, which increases mimicry and behavioral coordination while also establishing psychological closeness (Chartrand & Bargh, 1999; Galinsky, Wang, et al., 2008). Because of a desire to coordinate one’s behaviors with the perspective-taking target and achieve successful interactions, perspective-takers are more likely to behave in ways typical, or even stereotypical, of the target’s social group, allowing them to seamlessly interact with the target, whether it is thinking more conservatively or walking more slowly next to an elderly individual. Through these two separate processes of self-other merging, perspective-taking can produce differential effects on judgments and behavior, both of which facilitate the creation of social bonds. Although past research has documented these processes, the current research did not provide any empirical support for our proposed mediating mechanism of self-other overlap; future research should test whether both

seeing more of the self in the other reduces stereotyping at the same time that seeing more of the other in the self increases stereotypical behavior.

It should be noted that perspective-takers acted more competitively after exposure to an African-American target, a behavior that might seem to threaten social bonds. Galinsky et al. (2008), however, have argued that behavioral mimicry is a heuristic device used by perspective-takers to facilitate social interactions; when interactions proceed smoothly and successfully, social bonds are more likely to be formed. Perspective-taking is not unlike many decision-making heuristics (Tversky & Kahneman, 1974), with mimicry typically facilitating social bonds, but which can lead the perspective-taker to act in ways that ironically threaten social bonds. It is possible that perspective-taking aids not only the promotion of social coordination and bonds, but also social *success*, such that acting aggressively when an opponent is aggressive serves to increase one's status and social standing (Whiten & Byrne, 1997).

Finally, it is noteworthy that the social coordination afforded by perspective-taking works through the adoption of a target's stereotype. This suggests that perspective-taking will be most successful for behavioral coordination when stereotypes are more accurate. In contrast, perspective-taking's other effect – *decreased* prejudiced and stereotyping that arises from an application of the self to the other – could potentially decrease social coordination. This suggests reduced stereotyping might be a mere “side effect” of seeing the target as more similar to oneself. Overall, the effects, ironies (e.g., Galinsky & Ku, 2004), and entangled complexities of perspective-taking certainly provide us with future avenues of research.

### *Conclusion*

Counter to the reigning view that perception has symmetric effects on judgments and behavior, the current studies have demonstrated that perspective-taking can simultaneously lead

to more stereotype-consistent behavior and reduced stereotyping in judgment. Overall, our findings suggest why perspective-taking has been found to be a particularly effective strategy for navigating multicultural landscapes. To build the strongest social bonds, perspective-takers see more of themselves in others (leading to decreased stereotyping in judgments) while simultaneously seeing more of others in themselves (leading to increased use of stereotypes in their own behavior). Ultimately, perspective-taking allows individuals to reduce prejudice while remaining present and in sync with diverse others.

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## Endnotes

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<sup>1</sup> Preliminary analyses showed no significant effects of participants' sex in any of the studies, so we collapsed across participants' sex for all subsequent analyses.

ACCEPTED MANUSCRIPT

## Figure Captions

*Figure 1.* The effect of narrative essay writing instructions about an elderly target on judgments of Donna's dependence (Study 3). Means  $\pm$  SEM.

*Figure 2.* The effect of narrative essay writing instructions about an elderly target on walking speed (Study 3). Means  $\pm$  SEM.

Figure 1

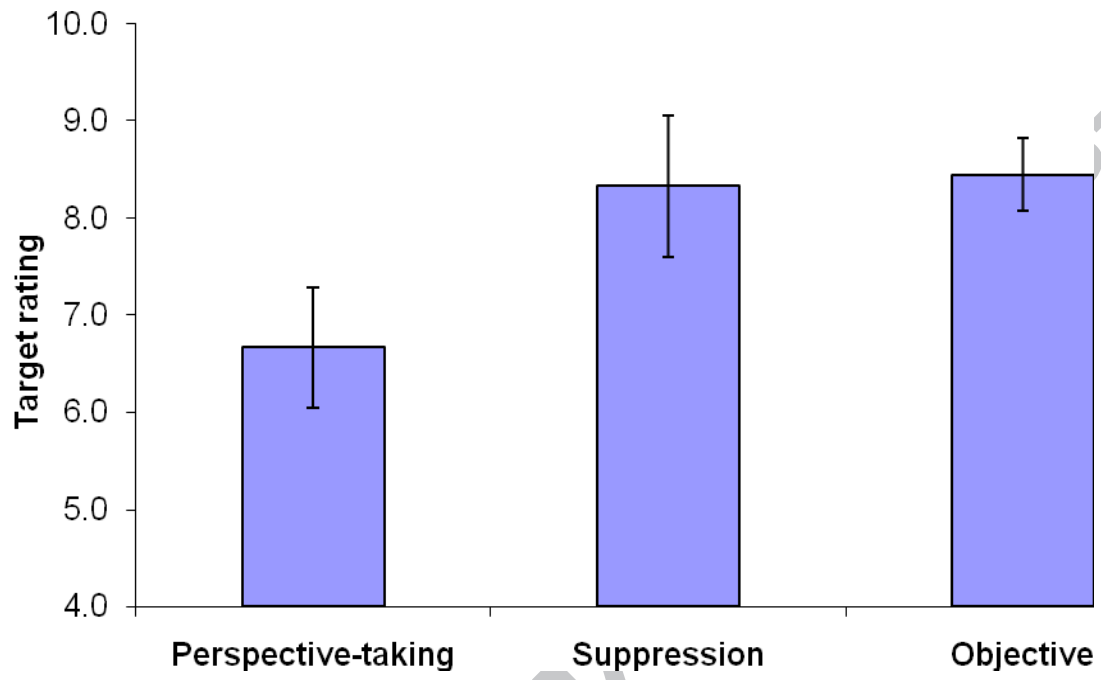




Figure 2

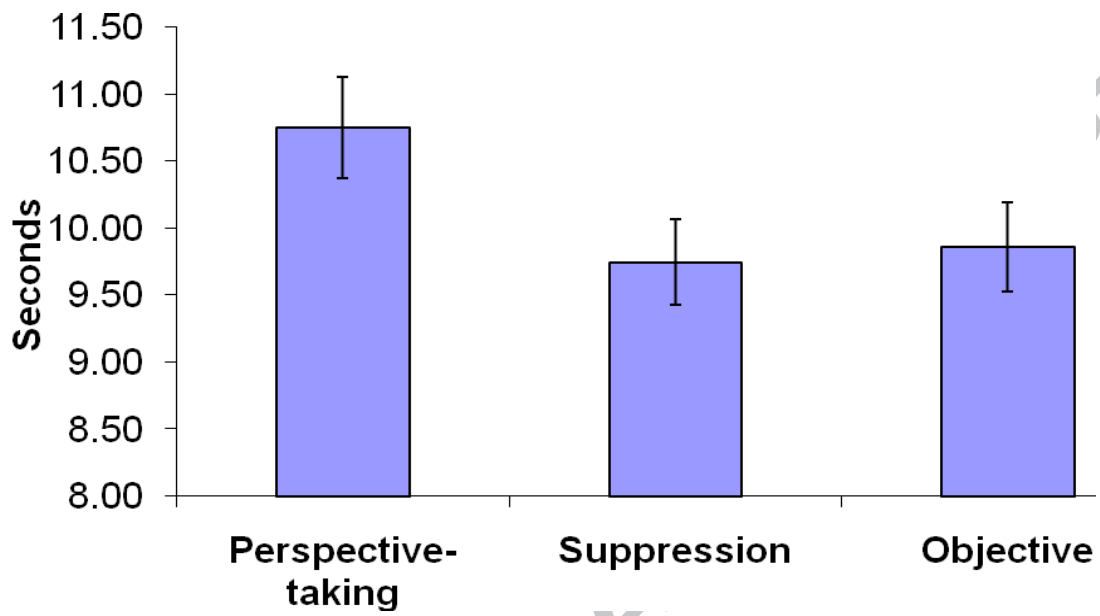


Table 1. *Meta-Analysis Summary of the Hypotheses*

Hypothesis	Effect Size Estimate (r)			Summary			
	1	2	3	<i>M</i>	<i>Z</i>	<i>p</i>	CI <sub>95%</sub>
Perspective-takers judge others less stereotypically	-.31	-.29	-.43	-.34	-3.08	.002	-.55, -.12
Perspective-takers behave more stereotypically	.42	.35	.40	.39	3.54	<.001	.17, .60
<i>N</i>	32	31	30				

*Note.* *M* represents the weighted average of the effect sizes. Heterogeneity tests were not significant.