

Available online at www.sciencedirect.com



ORGANIZATIONAL BEHAVIOR AND HUMAN DECISION PROCESSES

Organizational Behavior and Human Decision Processes 104 (2007) 207-223

www.elsevier.com/locate/obhdp

# "I think it, therefore it's true": Effects of self-perceived objectivity on hiring discrimination

Eric Luis Uhlmann<sup>a,\*</sup>, Geoffrey L. Cohen<sup>b</sup>

<sup>a</sup> Kellogg School of Management, Northwestern University, 2001 Sherdian Road, Evanston, IL 60208, USA <sup>b</sup> Department of Psychology, University of Colorado, Boulder, Colorado 80309-0345, USA

> Received 28 July 2006 Available online 7 September 2007 Accepted by Scott Highhouse

### Abstract

A sense of personal objectivity may prompt an "I think it, therefore it's true" mindset, in which people assume that their own beliefs and introspections are, by definition, valid and therefore worthy of being acted on. In the present studies, priming a sense of personal objectivity increased gender discrimination, particularly among decision-makers who endorsed stereotypic beliefs or who had stereotypic thoughts made cognitively accessible through implicit priming. Implications for discrimination in organizational contexts, and for theories of attitude–behavior consistency, are discussed. © 2007 Elsevier Inc. All rights reserved.

Keywords: Hiring evaluations; Workplace; Discrimination; Objectivity; Naïve realism

Hiring discrimination persists despite societal, organizational, and personal ideals to judge job candidates on the basis of their merit rather than their group memberships. Egalitarianism is an important value in many contemporary cultures, and the use of stereotypes provokes social censure. Corporations, which recognize the importance of gender equality to the maximization of human capital, spend millions of dollars each year in efforts to reduce workplace discrimination. Additionally, egalitarian ideals are often internalized, such that people feel self-critical and guilty when they exhibit stereotypic biases (Devine, Monteith, Zuwerink, & Elliot, 1991).

But at the same time, studies document gender and racial discrimination in hiring decisions, both in the laboratory and in real-world job settings (Bertrand & Mullainathan, 2004; Biernat & Kobrynowicz, 1997; Rudman, 1998; Rudman & Glick, 1999; Sidanius & Pratto, 1999). For traditionally male, high-status jobs, women are less likely to be hired (Eagly & Karau, 2002; Glick, Zion, & Nelson, 1988), are paid less (Jacobs, 1992; Jost, 1997), given less authority (Lyness & Thompson, 1997; Reskin & Ross, 1995), and promoted less often (Lyness & Judiesch, 1999) than their male colleagues. The factors that "disinhibit" discrimination in organizational contexts are not yet fully understood.

Identifying such disinhibitors of hiring discrimination in organizational contexts is important at many levels. Most Americans are broadly committed to the ideal that individuals should be judged based on their merits, not based on the social groups they happen to belong to (Sears, Henry, & Kosterman, 2000). As a result, discriminatory hiring evaluations sully the social reputation of the decision-maker and the organization in question. Indeed, discriminating against an individual based on the perceived characteristics of his or her group is illegal in many cases, and biased hiring evaluations leave organizations vulnerable to legal action. There can also be major economic consequences of discrimination. For example, companies that fail to hire qualified female

<sup>\*</sup> Corresponding author. *E-mail address:* e-uhlmann@northwestern.edu (E.L. Uhlmann).

<sup>0749-5978/\$ -</sup> see front matter @ 2007 Elsevier Inc. All rights reserved. doi:10.1016/j.obhdp.2007.07.001

applicants may find themselves unable to compete with companies that enforce egalitarian social norms (Becker, 1957). More generally, failure to provide women the same professional opportunities as men eliminates much of a society's human capital and is highly correlated with poverty (World Bank., 2001). Identifying factors that increase hiring discrimination allows us to anticipate when decision-makers are most likely to discriminate, and further suggests interventions that managers and other leaders can use to ensure that hiring evaluations are fair and unbiased.

Contemporary theories propose that the ambiguity and subjectivity of the judgment-making situation facilitates discrimination (Crandall & Eshleman, 2003; Gaertner & Dovidio, 1986; Hodson, Dovidio, & Gaertner, 2002; Snyder, Kleck, Strenta, & Mentzer, 1979). Ambiguous, subjective contexts are those that contain incomplete or conflicting information. These can be contrasted with objective contexts, in which considerable and non-conflicting information is available. In ambiguous contexts, stereotypes and prejudices are more likely to color judgments and guide actions. For example, White students avoid sitting next to a Black confederate only under ambiguous contexts, for instance in contexts in which their preference can be attributed to having a different movie preference (Batson, Flink, Schoenrade, Fultz, & Pych, 1986; see also Snyder et al., 1979).

We propose that an important disinhibitor of discrimination is decision-makers' sense of personal objectivity. When people believe that they are objective, they feel licensed to act on biases whose influence they may have otherwise suppressed due to personal and social inhibitions. Discrimination increases not only with the ambiguity of the situation but also with decision-makers' sense of their own personal objectivity and invulnerability to bias. A sense of personal objectivity, we suggest, gives rise to an "I think it, therefore it's true" mindset: People assume that their thoughts and beliefs are, by virtue of being theirs, valid and therefore worthy of being acted upon. To the extent that individuals harbor stereotypic thoughts and beliefs, as many do (Devine et al., 1991), such a state of self-perceived objectivity may increase gender discrimination.

Our theoretical contention dovetails with research on naïve realism (Robinson, Keltner, Ward, & Ross, 1995) the "bias blind spot" (Pronin, Gilovich, & Ross, 2004; Pronin, Lin, & Ross, 2002), and illusions of objectivity (Armor, 1999; Pyszczynski & Greenberg, 1987). The gist of this research is that people tend to see themselves as relatively objective and unbiased. Insofar as individuals believe themselves to be objective perceivers of the world, moreover, they view their beliefs as valid, and they perceive those who hold different views as poorly informed or biased (Kenworthy & Miller, 2002; Pronin et al., 2004; Ross & Ward, 1996). Previous theorizing also suggests that, to the extent that people feel assured of their personal objectivity, they perseverate in their beliefs, dismissing belief-disconfirming evidence, accepting with little scrutiny belief-confirming evidence (see Lord, Ross, & Lepper, 1979; Ross & Ward, 1996). Additionally, people also see themselves as above average with respect to their susceptibility to common judgmental biases and illusions (Armor, 1999; Epley & Dunning, 2000; Pronin, Kruger, Savitsky, & Ross, 2001; Pronin et al., 2002). For example, they accurately estimate that others will show the hindsight bias (i.e., the tendency to decide after the fact that one "knew it all along;" Fischhoff, 1975), but erroneously report that they themselves are relatively immune (Pronin et al., 2001; Pronin et al., 2002).

Taken together, this research suggests that self-perceptions of objectivity increase people's faith in the validity of their beliefs and thoughts, and perhaps even in the validity of their feelings and intuitions (cf. Pronin & Kugler, 2007). A sense of objectivity might thereby increase people's confidence in the validity of stereotypic beliefs, thoughts, and intuitions they have, and thereby increase their likelihood of acting on them. Research on attitude formation and change (Tormala & Petty, 2004; see also Briñol, Petty, & Tormala, 2004; Petty, Briñol, & Tormala, 2002) lends indirect support to our conceptual analysis: People are more likely to act on an attitude or thought when it is held with confidence or certainty (see also Fazio & Zanna, 1978). This suggests that the conviction that one is objective (and by extension, that one's beliefs and thoughts are as well) should increase the likelihood that an individual will act on his or her stereotypic beliefs and thoughts. Additionally, people confident in their own objectivity may overestimate their invulnerability to bias (Pronin et al., 2004), and thus fail to correct for the influence of stereotypic biases that they might have otherwise been careful to monitor.

The foregoing analysis suggests that a sense of personal objectivity should moderate the extent to which people act on their stereotypic thoughts and beliefs in an employment setting. Specifically, when people feel objective, their hiring judgments should be relatively more influenced by stereotypic beliefs and thoughts. Self-perceived objectivity seems particularly fruitful to pursue as a moderator of discrimination, as many organizational contexts seem to encourage a sense of personal objectivity—e.g., through the use of impersonal titles like "director" and "judge" that suggest that the individual in question is impartial. Indeed, by simply advancing in the organizational hierarchy, people might acquire increasing faith in their good judgment, freedom from bias and delusion, and objectivity in general.

To the extent that many people in America have stereotypical biases favoring men over women in high-status careers, a sense of personal objectivity may increase discrimination against women in organizational contexts. However, the impact of self-perceived objectivity should be particularly evident among individuals who hold negative stereotypes about women's capacities in the workplace. Additionally, like most self-perceptions. a sense of personal objectivity is not always cognitively accessible (Higgins, 1996). Accordingly, we expected that self-perceived objectivity would be more influential when situationally primed. Experiments 1-3 investigated the effects of priming a sense of personal objectivity on gender discrimination in hiring evaluations. Experiment 1 tested the "main effect" of priming participants on a sense of their personal objectivity and assessed whether this would in and of itself increase their level of gender discrimination. Experiment 2 tested the hypothesis that priming a sense of personal objectivity would increase gender discrimination particularly among evaluators who endorsed stereotypic beliefs. That is, personal objectivity priming should make evaluators more likely to discriminate to the extent that they hold stereotypic beliefs.

Finally, Experiment 3 tested the hypothesis that personal objectivity priming would lead evaluators to act not simply on their beliefs, but on introspections that had, through non-conscious priming, been made accessible. We tested whether people led to feel objective would subsequently be more influenced by non-consciously primed gender stereotypes in their hiring evaluations. Like other recent investigations (e.g., Norton, Vandello, & Darley, 2004), the present research focused largely on the hiring evaluations of male evaluators, as most individuals in a position to hire applicants for high-status jobs are men (Eagly & Karau, 2002; Glick et al., 1988). Stated more formally, we hypothesized that:

*Hypothesis 1*: Priming self-perceived objectivity would increase gender discrimination, primarily among evaluators who endorsed stereotypic beliefs.

*Hypothesis 2*: Priming self-perceived objectivity would increase gender discrimination, primarily among evaluators for whom gender stereotypes had been made cognitively accessible.

# **Experiment 1**

The primary objective of Experiment 1 involved testing the hypothesized causal effect of self-perceived objectivity on group-based discrimination. Some participants were primed with a sense of their own objectivity. This was accomplished simply by having them complete a relatively subtle and non-reactive manipulation of self-perceived objectivity—questionnaire items pertaining to their self-perceived objectivity (Armor, 1999). Prior work demonstrates that using scale items to prime ideas is a subtle but effective means of influencing people's social judgments (e.g., Katz & Hass, 1988; Sniderman & Piazza, 2002). Participants' evaluations of male and female job applicants were subsequently assessed. Based on the assumption that most members of the general populace endorse at least some stereotypic beliefs (Biernat & Kobrynowicz, 1997; Glick & Fiske, 1996; Rudman, 1998; Rudman & Glick, 1999; Sidanius & Pratto, 1999), we expected that people would evaluate the female applicant less favorably than the male applicant after being primed to view themselves as objective.

For exploratory purposes, participants also rated the applicants' specific traits and the importance of those traits to the job at hand. Personal objectivity priming could lead to a relatively uninhibited form of discrimination, wherein social perceivers evaluate the traits of female applicants less positively than those of male applicants. On the other hand, to the extent that individuals primed with a sense of their own objectivity feel compelled to justify their evaluation to themselves or others, they may give men and women equivalent trait evaluations and instead use the subtler strategy of constructing hiring criteria to favor male applicants (Hodson et al., 2002; Norton et al., 2004; Uhlmann & Cohen, 2005). They might downplay the occupational importance of the idiosyncratic traits that a female applicant has, or inflate the occupational importance of the idiosyncratic traits that a male applicant has.

### Methods

### Participants and design

Sixty-five adult men participated in the study for pay (\$6). The study featured a 2 (personal objectivity prime condition vs. control condition)  $\times$  2 (male job applicant vs. female job applicant) between-subjects design.

### Materials

Personal objectivity prime. Participants were primed with a sense of personal objectivity by asking them to complete (ostensibly as part of a separate study) four self-perceived objectivity questionnaire items. These items were "In most situations, I try to do what seems reasonable and logical," "When forming an opinion, I try to objectively consider all of the facts I have access to," "My judgments are based on a logical analysis of the facts," and "My decision making is rational and objective" (0 = very strongly disagree,10 = very strongly agree; see Armor, 1999). Half the participants completed the personal objectivity items before making their hiring evaluations. The other half did so after making their hiring evaluations. The manipulation was not necessarily designed to increase evaluators' conviction in their own objectivity, which would be difficult given that most people already see themselves as objective (Armor, 1999; Pronin et al., 2002). Indeed, in each of the present studies, over 88% of the participants rated themselves as above average in objectivity. Rather, consistent with previous research on priming, the manipulation was aimed at increasing the temporary accessibility and influence of personal objectivity (Higgins, 1996).

Hiring scenario. Participants were provided with a hiring scenario entitled "Hiring a Factory Manager." They were asked to imagine being a company executive evaluating an applicant for the job of factory manager. The factory manager would be responsible for increasing worker satisfaction and productivity, providing performance reviews to employees, negotiating conflicts, responding to consumer complaints, and increasing profits. The success or failure of the new factory manager, participants were informed, would heavily influence company profits, and whether they, in turn, would keep their job. The present research examined evaluations of applicants for high status, traditionally male jobs because the social problem to which it is most relevant is the exclusion of women from important (and usually stereotypically male) leadership positions.

Applicant descriptions. The job applicant was described either as male ("Gary") or as female ("Lisa"). These names were selected from pairs of male and female names identified by Kasof (1993) as equal in attractiveness, intellectual-competence connotation, age connotation, and racial connotation. The applicant was presented as technically proficient and as having strong organizational skills, but as lacking interpersonal skills. The applicant was described as strong when it came to some traits but weak on others, so that we could examine whether participants assigned the traits differential levels of importance as a function of the applicant's gender (i.e., whether they constructed job criteria in a biased manner). We made the applicant descriptions as unambiguous as possible, such that it was difficult to view the applicant as anything but technically proficient and organized, yet interpersonally unskilled. But at the same time, the information about the applicant could be characterized as ambiguous in the sense that some information was favorable and other information unfavorable.

Applicant ratings. Participants rated the strength of the applicant's credentials along each of a series of traits. The technical-organizational traits were: *technical expertise* and *organizational skills*. The interpersonal traits were *ability to build good work relationships* and getting along well with others. Ratings were made on separate scales ranging from 1 (extremely weak in this area) to 11 (extremely strong in this area).

*Importance ratings.* Next, participants' hiring criteria were assessed. Participants rated the importance of each of the traits noted above in determining success as a factory manager. Responses were provided on separate scales ranging from 1 (*makes success as a factory man*-

ager much less likely) to 11 (essential to success as a factory manager).

Hiring evaluation. Participants responded to three items assessing the extent to which they believed the applicant "would be successful as a factory manager" (1 = not successful at all, 9 = extremely successful), was "a good fit" for the position (1 = an extremely bad fit, 9 = an extremely good fit), and "should be hired" (1 = should definitely not be hired, 9 = should definitely be hired).

### Procedure

Participants completed the experimental materials while sitting in a booth. The measures were completed in the order in which they are described in the methods section, with one important exception. Specifically, participants in the personal objectivity prime condition completed the four self-perceived objectivity items at the very beginning of the study, whereas control participants completed the self-perceived objectivity items after their hiring evaluations. The objectivity questionnaire was presented to participants as part of exploratory research involving a different study from the primary packet of materials. All participants read the hiring scenario and applicant description, and subsequently provided their applicant ratings, their importance ratings, and their hiring evaluations.

# Results

We carried out a 2 (objectivity prime condition vs. control condition)  $\times$  2 (applicant gender: male vs. female) ANOVA for each measure.

### Self-perceived objectivity

The four items used to prime a sense of self-perceived objectivity formed a reliable index ( $\alpha = .78$ ). Personal objectivity primed participants (who completed the self-perceived objectivity items at the beginning of the study, as primes) and control participants (who completed the items at the end of the study, after making their hiring evaluations) did not differ in self-perceived objectivity (Ms = 8.05 and 7.77, SDs = 1.18 and 1.30, respectively), F < 1. There was likewise no significant effect of applicant gender, or interaction between personal objectivity priming and applicant gender, Fs < 1.

# Hiring evaluations

The three hiring evaluation items formed a reliable index ( $\alpha = .90$ ). There was no main effect of personal objectivity priming, F(1, 61) = 2.84, p = .11, or of applicant gender, F < 1. As expected, however, there was a significant interaction between personal objectivity priming and applicant gender, F(1, 61) = 5.54, p = .02, d = .60. As displayed in Fig. 1, participants in the control condition gave the male applicant and female

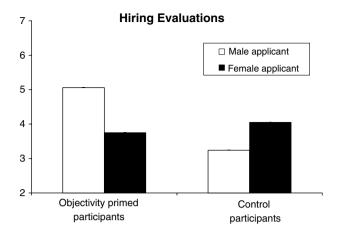


Fig. 1. Experiment 1: Hiring evaluations as a function of objectivity priming and applicant gender. Higher numbers indicate more positive evaluations of the applicant.

applicant similar evaluations (Ms = 3.24 and 4.05, SDs = 1.88 and 1.00, respectively), t(30) = 1.27, p = .21. By contrast, in the personal objectivity primed condition, participants favored the male applicant (M = 5.06, SD = 2.18) over the female applicant (M = 3.75, SD = 1.70), t(32) = 2.14, p = .039, d = .76.

#### Applicant and importance ratings

Did participants primed on a sense of personal objectivity use the subtle strategy of constructing hiring criteria (e.g., by downplaying the occupational importance of a female applicant's areas of strength) or did they simply evaluate the female applicant less favorably than the male applicant? They appear to have done the latter.

The ratings of the applicant's technical-organizational and interpersonal traits were averaged into separate indices ( $\alpha s = .69$  and  $\alpha = .96$ , respectively). For applicant and importance ratings, the only significant effect was an interaction between personal objectivity priming and applicant gender for the two-item index assessing the perceived strength of the applicant's interpersonal skills, F(1,60) = 4.78, p = .033, d = .56. Participants primed on personal objectivity rated the male applicant as more interpersonally skilled than the female applicant (Ms = 3.12 and 1.94, SDs = 1.80 and .83, respectively), t(31) = 2.39, p = .023, d = .86. In contrast, control participants rated male and female applicants comparably (Ms = 1.86 and 2.54, SDs = 1.12 and 2.70, respectively), t < 1.

### Discussion

The results of Experiment 1 support the hypothesis that a sense of personal objectivity can contribute to group-based discrimination. Specifically, priming a sense of personal objectivity led male evaluators to discriminate against female (relative to male) job applicants. One noteworthy aspect of this effect is that it was induced with a relatively subtle manipulation of self-perceived objectivity. Merely four short questionnaire items proved sufficient to prompt statistically sizable levels of gender discrimination (almost .70 standard deviations' difference in the hiring evaluations assigned to male versus female applicants).

Results also shed some initial light on the mechanism through which a sense of personal objectivity contributes to discrimination in organizational contexts. Personal objectivity priming did not influence the subtle tactic of defining hiring criteria in a biased manner. Instead, it led participants to see overt differences in the strengths of the male versus female applicant, even though these two applicants were identically described. This finding is striking given that the applicants' traits were described unambiguously, which generally reduces group-based influences on impression formation (Kunda & Thagard, 1996; Locksley, Borgida, Brekke, & Hepburn, 1980; Locksley, Hepburn, & Ortiz, 1982). A sense of personal objectivity appears to have led to relatively overt gender discrimination.

Like other recent investigations (e.g., Norton et al., 2004), the present study focused on the hiring evaluations of male evaluators, as most individuals in a position to hire applicants for high-status jobs are men (Eagly & Karau, 2002; Glick et al., 1988). But at the same time, it was of interest to examine how female evaluators would respond to our objectivity priming manipulation. To this end, we recruited 77 female participants from the same location and ran them through the procedure described in Experiment 1. No theoretically meaningful effects of objectivity priming were observed. Among these female participants, we found only evidence of ingroup bias, such that female applicants received more positive evaluations than did male applicants (Ms = 3.74 and 4.16, SDs = 1.50 and 1.70), F(1,73) = 3.99, p = .049, d = .47. There was no main effect of objectivity priming, F(1,73) = 1.20, p = .26, and no interaction between objectivity priming and applicant gender, F < 1. Thus, female participants responded to objectivity priming in a manner different from the way male participants did. We return to the issue of potential gender differences in response to objectivity priming in General discussion.

A notable shortcoming of Experiment 1 is that stereotypic beliefs were not assessed. A more precise statement of our prediction is that self-perceived objectivity should lead people to act on their preexisting beliefs about social groups. The tendency for personal objectivity priming to increase discrimination against women should thus be found primarily among evaluators who endorse stereotypic beliefs. Stated more precisely, personal objectivity priming should lead to a greater correspondence between one's stereotypic beliefs and one's hiring evaluations. Experiment 2 investigated this possibility.

# **Experiment 2**

In Experiment 2, we sought to provide a more direct test of the hypothesis that a sense of personal objectivity leads people to act on stereotypic beliefs they hold. Accordingly, we assessed beliefs about men's superiority relative to women in the workplace. We hypothesized that stereotypic beliefs would be more predictive of hiring evaluations after participants had been primed with their own objectivity. Hiring criteria and perceptions of the strength of the applicant's credentials were again assessed.

# Methods

# Participants and design

Thirty-five male undergraduates participated in the study in return for either course credit or payment (\$6). The study featured a 2 (personal objectivity prime condition vs. control condition)  $\times$  2 (applicant gender: male vs. female) between subjects design.

# Materials

Personal objectivity prime. Participants were primed with a sense of their own objectivity by asking them to complete (ostensibly as part of a separate survey) seven self-perceived objectivity questionnaire items (Armor, 1999): "How realistic is your view of the world?", "How objective are you when making judgments and decisions?", "How even-handed are you when weighing evidence that is relevant to your decisions?", "I try to act in accordance with what seems like the reasonable and logical thing to do", "When forming an opinion, I try to objectively consider all of the facts I have access to", "My judgments are based on a logical analysis of the facts", and "My decision making is rational and objective." Responses were made on appropriately labeled 11-point scales. Half the participants completed the personal objectivity items before making their hiring evaluations, the other half afterward.

*Hiring scenario.* Participants were provided with a hiring scenario entitled "Hiring a New Police Chief." They were asked to imagine that they had recently been elected mayor of a town, and that during the election they had promised to appoint a new police chief who would clean up scandal in the police department and reduce crime. The success or failure of the new police chief, participants were told, would heavily affect their re-election as mayor.

Description of applicant credentials. The job applicant was again described either as male ("Brian") or as female ("Karen;" see Kasof, 1993). The applicant was presented as well-educated and skilled in administration, but as having little "street" experience in terms of making arrests and pursuing criminals.

Applicant ratings. As in Experiment 1, participants rated the strength of the applicant's credentials along each of a series of traits. The "educated" traits were: well-educated, administrative skills, organizational skills, experienced as an administrator, detail-oriented, computer skills, ability to communicate with the media, and has kids. The "streetwise" traits were: streetwise, tough, and has made a large number of arrests. (The applicant description provided unambiguous information about the applicant's standing along each of these traits.) Ratings were made on scales ranging from 1 (extremely weak in this area) to 11 (extremely strong in this area).

Importance ratings. Next, participants rated how important each of the streetwise and educated traits noted above was in determining success at the job of police chief  $(1 = makes \ success \ as \ a \ police \ chief$  much less likely,  $11 = essential \ to \ success \ as \ a \ police \ chief$ ).

*Hiring evaluation.* Participants responded to three items assessing the extent to which they believed the applicant "would be successful as a police chief" (1 = not successful at all, 9 = extremely successful), was "a good fit" for the position (1 = an extremely bad fit, 9 = an extremely good fit), and "should be hired" (1 = should definitely not be hired, 9 = should definitely be hired). These three items were averaged to form a measure of overall evaluation of the applicant.

Stereotypic beliefs. The stereotypic beliefs items were: "Sometimes it's the objective thing to do to hire a man rather than a woman," "It's a fact that men are better suited for some jobs than are women," and "It's a fact that men are better suited for the job of police chief than are women"  $(1 = strongly \ disagree,$  $7 = strongly \ agree)$ .

### Procedure

Participants completed the experimental materials in a private laboratory room. Participants in the personal objectivity prime condition first completed seven self-perceived objectivity items. All participants then read the hiring scenario and applicant description, provided their applicant and importance ratings, and made their hiring evaluations. Control participants further completed the self-perceived objectivity items at this point. All participants then returned the completed packet of questionnaires to the experimenter, who gave them a second packet containing the questionnaire used to assess stereotypic beliefs.

7

6

### Results

Unless otherwise specified, we carried out a 2 (objectivity prime condition vs. control condition)  $\times$  2 (applicant gender: male vs. female) ANOVA for each measure.

# Self-perceived objectivity

The seven self-perceived objectivity items used as primes formed a reliable index ( $\alpha = .87$ ). Notably, personal objectivity primed participants (who completed the self-perceived objectivity items at the beginning of the study, as primes) and control participants (who completed those items after making their hiring evaluations) did not differ in self-perceived objectivity (Ms = 7.36and 7.33, SDs = 1.72 and 1.33, respectively), F < 1. There was likewise no significant effect of applicant gender, and no interaction between personal objectivity priming and applicant gender, Fs < 1.

### Stereotypic beliefs

The stereotypic beliefs measure was reliable ( $\alpha = .77$ ), and the mean (M = 4.52, SD = 1.59) was marginally higher than the neutral point of the scale, *paired* t(34) = 1.95, p = .06, d = .67. Specifically, 57% of participants displayed overall agreement with the stereotypic beliefs items, 6% were neutral, and 37% disagreed. Notably, no effects of personal objectivity priming were evident with regard to stereotypic beliefs (Ms = 4.67 and 4.42, SDs = 1.52 and 1.68 in the personal objectivity prime and control conditions, respectively), F < 1. There was again no significant effect of applicant gender, or interaction between personal objectivity priming and applicant gender, Fs < 1.

# Mean effects of personal objectivity priming on discrimination

The three hiring evaluation items formed a reliable index ( $\alpha = .91$ ). A marginally significant interaction between personal objectivity priming and applicant gender emerged, F(1,31) = 4.09, p = .052, d = .73. As seen in Fig. 2, whereas control participants gave the male applicant and female applicant equivalent evaluations (Ms = 5.37 and 5.73, SDs = 1.88 and 1.22, respectively), t < 1, participants primed with a sense of personal objectivity again favored the male applicant (M = 5.67, SD = 1.32) over the female applicant (M = 3.94, SD = 1.53), t(13) = 2.21, p = .031, d = 1.23.

# *Relationship between stereotypic beliefs and hiring evaluations*

We used regression to assess the effects of personal objectivity priming on the hiring evaluations of participants high and low in stereotypic beliefs. We contrast-coded the experimental manipulation (personal objectivity prime condition = -1, control condition = +1) and

5 -4 -3 - Objectivity primed Control participants participants

**Hiring Evaluations** 

Fig. 2. Experiment 2: Hiring evaluations as a function of objectivity priming and applicant gender. Higher numbers indicate more positive evaluations of the applicant.

applicant gender (male applicant = -1, female applicant = +1) and centered stereotypic beliefs by standardizing it. We then predicted hiring evaluations from objectivity prime condition, applicant gender, stereotypic beliefs, and the interactions between them. All two-way and three-way interactions were included in the regression analysis. The theoretically expected three-way interaction between personal objectivity priming, applicant gender, and stereotypic beliefs emerged, B = .80, t(27) = 3.93, p = .001. Among participants low in stereotypic beliefs (i.e., 1 standard deviation below the sample mean), there was no interaction between personal objectivity prime and applicant gender, B = -.26, t(27) = -.90, p = .37. However, among participants high in stereotypic beliefs (i.e., 1 standard deviation above the sample mean), a significant personal  $prime \times applicant$ objectivity gender interaction emerged, B = 1.40, t(27) = 4.77, p < .001. Further examination revealed that participants high in stereotypic beliefs who were primed with a sense of personal objectivity gave male applicants more positive hiring evaluations than female applicants, B = -1.93, t(27) = -4.26, *p* < .001.

# Trait and importance ratings

Of additional interest was whether participants primed with a sense of personal objectivity subsequently perceived the female applicant less favorably or engaged in the more subtle strategy of constructing their hiring criteria in a biased manner. The ratings of the applicant's educated and streetwise traits were averaged into separate indices ( $\alpha = .49$  and  $\alpha = .80$ ). The low reliability of the educated trait composite is potentially problematic. However, two factors lessen our concern with this low reliability. First, the low reliability of the composite occurred only in this study. In the research reported by Uhlmann and Cohen (2005), the same trait items formed a highly reliable index ( $\alpha = .87$ ). This suggests that the

□ Male applicant

Female applicant

low reliability found in this study was an anomaly. Second, the low reliability of this measure would presumably work against our obtaining the predicted condition effects. That is, the noisiness of the measure should make it relatively more difficult to detect reliable condition effects along it. As in Experiment 1, the only significant effect involved overt evaluations of the applicant. Specifically, personal objectivity priming led to less favorable perceptions of the female candidate relative to the male candidate along educated traits. For the educated set of traits, the personal objectivity prime  $\times$  applicant gender interaction was significant, F(1, 30) = 5.63, p = .024, d = .87. Participants primed on a sense of personal objectivity perceived male applicants (M = 9.42, SD = .63) as better educated than female applicants (M = 7.23, SD = 1.96), t(12) = 2.99, p = .011, d = 1.73.Control participants did not (Ms = 9.11 and 8.78,SDs = .74 and 1.04), t < 1.

### Discussion

Judgment makers primed with a sense of personal objectivity were more likely to discriminate against the female applicant for the job of police chief. Consistent with our theoretical analysis, however, the effect of personal objectivity priming occurred only for evaluators who endorsed stereotypic beliefs. Once again, personal objectivity priming led to a relatively uninhibited form of discrimination, leading evaluators to perceive the male candidate as having better credentials than the female candidate, even though the credentials of the male and female candidates were identically and unambiguously described.

The results of Experiment 2 are open to an alternative explanation based on theories of cognitive consistency (Bem, 1972; Festinger, 1957). Specifically, rather than licensing judgment makers to act on their beliefs, personal objectivity priming may lead them to rationalize their hiring evaluations by changing their stereotypic beliefs. For instance, after evaluating a male applicant more positively than a female applicant, a manager might justify his evaluations by endorsing the stereotypic belief that "there are some jobs that men are better suited for than women." The pressure to be consistent might prove more acute after judgment makers are primed to view themselves as objective. While this alternative explanation cannot account for the finding that personal objectivity priming increased pro-male gender discrimination in Experiment 2, but had no effect on the level of stereotypic beliefs, it could potentially explain the positive correlations between hiring evaluations and stereotypic beliefs observed among personal objectivity primed participants.

Accordingly, we carried out a supplemental study, designed to demonstrate heightened correspondence between stereotypic beliefs and hiring preferences under conditions ruling out such post-hoc justifications. A total of 70 adult men participated in exchange for payment (\$6). The hiring scenario was the same as that used in Experiment 3 (discussed below), and therefore is not described in depth here. Participants selected between two equally qualified candidates (one male, one female) for a high-status job. Half the participants reported their stereotypic beliefs at the beginning of the study, half at the end. Notably, whereas the average level of stereotypic beliefs in Experiment 2 had fallen on the "promale" side of the scale, it fell at the neutral point in this supplemental study, paired t < 1. Specifically, 42% of participants displayed overall agreement with the stereotypic beliefs items, 18% were neutral, and 40% disagreed. The supplemental study thus yielded a sample with a more balanced range of stereotypic beliefs than did the previous study, encompassing not only individuals with "pro-male" stereotypic beliefs but also many individuals who strongly rejected such beliefs. Participants were randomly assigned to either a personal objectivity prime condition or to a control condition.

Because of the non-normal distribution of hiring evaluations, they were first rank-transformed and then subjected to ordinal regression (as described in Experiment 3; parametric procedures yielded virtually identical statistical significance levels). We predicted hiring preferences from objectivity prime condition, stereotypic beliefs, and the interaction between them. As predicted, there was a significant interaction between personal objectivity priming and stereotypic beliefs, B = -.78, Wald(1) = 11.06, p = .001. This critical interaction was not moderated by the order of the stereotypic beliefs questionnaire,  $F \le 1$ . Replicating the results of Experiment 2, participants high in stereotypic beliefs favored the male applicant (relative to the female one) more in the personal objectivity prime condition than in the control condition (medians = 8.00 and 6.00, respectively), B = -.74, Wald(1) = 5.41, p = .02. Interestingly, participants low in stereotypic beliefs (i.e., who expressly rejected stereotypes favoring men over women in the workplace) showed the opposite effect. They favored the male applicant (relative to the female one) less in the personal objectivity primed condition than in the control condition (medians = 6.00 and 8.00, respectively), B = .81, Wald(1) = 6.50, p = .011. Because stereotypic beliefs were measured at the beginning of the session for half of our participants, this study ruled out post hoc changes in stereotypic beliefs as an explanation for the increased correspondence between stereotypic beliefs and hiring preferences in the personal objectivity prime condition.

These findings also distinguish the effects of personal objectivity from those of nonsexist credentials (Monin & Miller, 2001). Prior research finds that providing people with the opportunity to affirm their nonsexist identity (e.g., by disagreeing with blatantly sexist statements)

leads them to discriminate against women more. While both credentialing and personal objectivity effects address the factors that reduce inhibitions against using social stereotypes, they are not the same. In our supplementary study, individuals who rejected stereotypic beliefs and who were primed with a sense of personal objectivity became relatively less likely to favor the male applicant, and relatively more likely to favor the female applicant. Such individuals appear to have become more likely to apply their egalitarian beliefs in making their hiring evaluations. While a direct comparison cannot be made because individual differences in stereotypic beliefs were not a focus of the Monin and Miller (2001) work, there is little theoretical basis to expect nonsexist credentials to produce such a pattern of results. Nonsexist credentialing is theorized to exert a uniform effect-it increases discrimination against women. In contrast, personal objectivity priming can either increase or decrease discrimination against women, depending on the decision-makers' prior beliefs. Importantly, to the extent that negative stereotypes are widely endorsed, or to the extent that such stereotypes are simply made cognitively accessible in the hiring situation (an issue addressed in Study 3), personal objectivity priming will tend to produce, on average, a main effect increase in discrimination against women.

Another difference between nonsexist credentials and self-perceived objectivity lies in whether evaluators act in a manner contrary to their self-perceived state. Suggesting to evaluators that they are objective leads them to do what they believe to be objective (as measured by stereotypic beliefs items such as "Sometimes it's the objective thing to do to hire a man rather than a woman")-a consistency effect. In contrast, suggesting to evaluators that they are nonsexist makes them more sexist-an "ironic" effect. Additionally, a sense of personal objectivity may have general effects beyond the moral domain. It may affect not only gender discrimination, but domains such as consumer choices and voting behavior, that is, any domain where a sense of personal objectivity might increase the consistency between people's beliefs, thoughts, and intuitions on the one hand and their behavior on the other.

# **Experiment 3**

A strong form of our hypothesis is that an "I think it, therefore it's true" mindset leads people to act not simply on their beliefs, but on cognitive content that is temporarily accessible—even if that content issues not from personal beliefs but from incidental environmental stimuli. That is, people made to feel objective might assume that because they have a thought, that that thought is, by virtue of being theirs, valid and therefore worthy of being acted on. That is, when people assume that they are objective, they may naturally infer that their thoughts and beliefs are, by definition, objective reflections of reality.

In Experiment 3, the cognitive accessibility of stereotypic thoughts was manipulated by priming participants with words representative of common gender stereotypes via a sentence-unscrambling task (Banaji, Hardin, & Rothman, 1993; Bargh, Chen, & Burrows, 1996; Srull & Wyer, 1979). Research indicates that unobtrusively priming concepts in this manner can have dramatic effects on subsequent judgments and behaviors (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Troetschel, 2001; Bargh et al., 1996; Devine, 1989; Dijksterhuis & Bargh, 2001). For instance, priming stereotypes of the elderly ("Florida", "gray") led participants to walk more slowly as they left the experiment (Bargh et al., 1996) and priming dependence caused evaluators to perceive a female target (but not a male target) as dependent (Banaji et al., 1993). (Consistent with previous research, by "nonconscious" priming, we mean that participants are unaware of the influence of the prime on their actions, not that the prime stimuli themselves are subliminal or processed outside of awareness; Bargh & Chartrand, 2000). We expected that non-consciously priming gender stereotypes would increase discrimination against a female applicant, particularly among evaluators led to view themselves as objective.

Experiment 3 also tested the robustness of the effects of personal objectivity priming by asking participants to select *between* a male and a female applicant. Evaluating alternatives at the same time tends to reduce judgmental biases, because such biases are relatively easier to detect in such contexts (Baron 1994; DeSteno, Bartlett, Braverman, & Salovey, 2002; Gaertner & Dovidio, 1986; Greenwald, 1976; Lichtenstein & Slovic, 1973). Therefore, it was of interest to assess whether personal objectivity priming would increase the expression of stereotypic bias even in a hiring context where judgment makers had to choose explicitly between a male and a female applicant.

This study further explored the psychological processes underlying the effects of personal objectivity priming on hiring evaluations. Perhaps evaluators led to view themselves as objective trust their first gut instinct as the correct one, or experience a heightened need for closure (Kruglanski & Webster, 1996). Such effects could lead them to deliberate less carefully, and such relatively shallow processing could facilitate the use of stereotypic beliefs (Banaji et al., 1993). On the other hand, it is possible that people who feel confident in their objectivity think in greater depth than they otherwise might. To address these exploratory issues, we included a thought listing measure in which participants were asked to list all the thoughts they had had about the two job candidates and to record the valence of each thought with respect to the two candidates (Cacioppo & Petty, 1981; Cacioppo, Petty, Kao, & Rodriguez, 1986; Chaiken & Maheswaran, 1994).

### Methods

# Participants and design

Thirty-eight (21 male, 17 female) undergraduates participated in the study in return for pay (\$6). Participants first completed a sentence unscrambling task that primed them either with words related to gender stereotypes or with control words. They were further randomly assigned to either a personal objectivity prime condition or a control condition. They next read a hiring scenario that obliged them to choose between a male and a female applicant for the job of company representative. To avoid having participants choose between applicants who were identical, we created two distinct applicant profiles for the hiring scenario (e.g., one applicant for company representative was creative but disorganized, and the other applicant was organized but uncreative). We counterbalanced, between subjects, the pairing of applicant profile with applicant gender.

The study took the form of a 2 (gender stereotype prime vs. control prime)  $\times$  2 (personal objectivity prime condition vs. control condition)  $\times$  2 (participant gender)  $\times$  2 (pairing of applicant gender and applicant profile) between-subjects design.

#### Materials and procedure

All measures were completed in the order described.

Gender stereotype prime. Participants completed a 11item sentence unscrambling task at the very beginning of the study (Srull & Wyer, 1979). For each item, participants were presented with five words-four of which comprised a viable sentence—in a nonsense order. They were instructed to unscramble these words to make a viable sentence (while ignoring the one word that did not belong). For instance, the nonsense sentence "ate house the new is" could be unscrambled as "the house is new" after dropping the word "ate." In the genderstereotype prime condition, 6 of the 11 items contained a word relevant to gender stereotypes (pink, gossiped, Barbie, make-up, nurse, and emotional). None of the gender stereotype words was the word that had to be crossed out. In the control condition, the 6 items contained neutral words (e.g., gallons, store, chair, building, curtain, train). This unobtrusive priming procedure served as our experimental manipulation of gender stereotype accessibility (see Banaji et al., 1993; Bargh et al., 1996; Devine, 1989).

*Personal objectivity prime.* Participants were then primed with a sense of their own objectivity by asking them to complete (ostensibly as part of a separate study) the same personal objectivity items used in Experiment 1. Participants assigned to the control condition rated themselves in response to four alternative items: "I consider myself a morning person," "I prefer light colors to dark colors," "I enjoy listening to the radio," and "I usually get a full night's sleep".

*Hiring scenario.* The scenario, entitled "Hiring a Company Representative," was based on a scenario created by Monin and Miller (2001). Participants were asked to imagine being an executive evaluating an applicant for the job of representative of a manufacturing company. The company representative would be responsible for negotiating contracts with foremen and contractors, for settling business conflicts, and for increasing profits. The success or failure of the new company representative, participants were informed, would heavily affect company profits, and would thus determine whether they kept their job.

Applicant descriptions. The two applicants were named Lisa and Gary (Kasof, 1993). One applicant had three years of experience as a representative for a company that manufactured appliances. This applicant was described as creative and as good at keeping up with technical developments, but as having trouble managing accounts and as occasionally missing important meetings. The other applicant had six years of experience as a representative for a company that manufactured auto parts. This applicant was described as extremely well-organized, but as half-hearted at keeping up on technical developments and as not an especially creative or innovative thinker. Pairing of applicant description with applicant gender (Lisa or Gary) was counterbalanced between subjects.

*Hiring evaluations.* After reading the applicant descriptions for each scenario, participants selected the person they would hire for the job (i.e., 1 = Lisa is better suited, 6 = about the same, 11 = Gary is better suited).

Thought listing measure. Participants were asked to list all their thoughts about the candidates and to indicate with a "G" thoughts that supported hiring Gary (the male candidate) and with an "L" thoughts that supported hiring Lisa (the female candidate).

The total number of thoughts listed was used to assess the extent to which evaluators deliberated carefully about their hiring evaluations (i.e., the depth of processing). Another way to assess the deliberateness of hiring evaluations involves examining the correlation between participants' "thought valence" and their final hiring evaluation (see Cacioppo et al., 1986; Chaiken & Maheswaran, 1994; Cohen, 2003). To the extent that hiring evaluations are cognitively elaborated (i.e., based upon a deliberate and systematic evaluation of applicants), hiring evaluations should follow from thoughts. That is, support of the male (relative to the female) applicant should correlate with the positivity of one's thoughts toward the male (relative to the female) applicant. To examine this issue, we assessed the correlation between thought valence and hiring preferences.

Funneled debriefing. Finally, we probed participants' awareness of the influence of the gender stereotype primes on their evaluations (Bargh & Chartrand, 2000). For instance, participants were asked "Did the sentence unscrambling task you completed influence which candidate you decided to hire in any way?" (1 = Definitely Not, 5 = Not Sure, 9 = Definitely Yes). If they responded affirmatively, participants were asked to describe the influence of the primes. We expected that, as in prior work (e.g., Bargh et al., 1996), few if any participants would report being influenced by the words embedded in the scrambled-sentences task.

# Results

### Hiring evaluations

The distribution of hiring preferences was highly nonnormal and in fact bimodal, such that the modes were three and eight, as most participants chose one of the two job candidates rather than asserting neutrality. Accordingly, we used a non-parametric test robust against violations of normality (Conover & Iman, 1981). Hiring preferences were ranked and subjected to an ordinal regression. Medians rather than means are reported for analyses involving this ranked hiring preferences variable (notably, non-parametric Mann–Whitney U tests—also robust against violations of normality—yielded virtually identical significance levels for the reported contrasts, as did ordinary parametric procedures).

We conducted an ordinal regression predicting hiring preferences from objectivity prime condition, stereotype prime condition, and the interaction between them. There was no significant effect of personal objectivity priming on whether participants preferred the male or female applicant, B < 1. However, the theoretically expected interaction between the personal objectivity prime and the gender stereotype prime emerged, B = .63, Wald(1) = 4.34, p = .037. As displayed in Fig. 3, among participants primed with a sense of personal objectivity, activating gender stereotypes led to discrimination against the female applicant (relative to the male applicant), B = -1.10, Wald(1) = 5.71, p = .017. By contrast, for participants who had *not* been primed with their own objectivity, activating gender stereotypes had no influence on hiring evaluations, B = .26, Wald(1) = .37, p = .54.

Adding main effects and interactions involving participant gender to the model left intact the personal objectivity prime  $\times$  gender stereotype prime interaction,

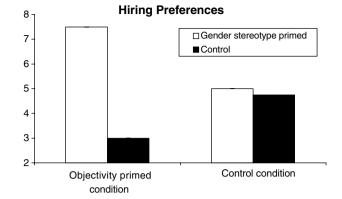


Fig. 3. Experiment 3: Hiring preferences as a function of objectivity priming and gender stereotype priming. The numbers displayed are medians, with higher numbers reflecting more positive evaluations of male applicants than of female applicants.

B = .82, Wald(1) = 5.05, p = .025. Interestingly, there was no three-way interaction between personal objectivity priming, gender stereotype priming, and participant gender, B = -.29, Wald(1) = .67, p = .41. However, an exploratory analysis suggested the significant interaction between personal objectivity priming and gender stereotype priming was driven by male participants. No such interaction was found among female participants, B = .47, Wald(1) = .76, p = .38. By contrast, among male participants a significant personal objectivity prime × gender stereotype prime interaction emerged, B = 1.10, Wald(1) = 4.69, p = .03. This exploratory analysis of participant gender differences was based in previous work showing that men are more likely than women to endorse sexist and/or gender stereotypic beliefs (Swim, Aikin, Hall, & Hunter, 1995). Of course, the lack of a statistically significant three-way interaction involving participant gender advises considerable caution in interpreting this tentative finding. However, they do tentatively suggest that the effects of objectivity priming were relatively more robust among men than women.

### Thought listings

Depth of processing. To the extent that the personal objectivity manipulation increased gender discrimination by heightening needs for closure or triggering shallow, heuristic processing, personal objectivity priming should have decreased the number of cognitive responses (i.e., number of thoughts about the hiring evaluation). This did not occur. There were no main effects either of personal objectivity priming or of gender stereotype priming on number of thoughts, and no interaction between the two priming manipulations, Fs < 1. If anything, participants primed with a sense of personal objectivity listed slightly more thoughts about the applicants (M = 5.98) than did control participants (M = 5.38). (Interestingly, the only condition in which

relatively shallow processing tended to correlate with greater discrimination was the control condition in which no experimental treatments had been administered, r = -.65, p = .078; all other rs < |.22|, *ns.*)

*Valence of processing.* Our measure of processing valence was also informative with respect to the psychological effects of the experimental manipulations. We computed an index of thought valence—i.e., the extent to which thoughts favored hiring the male relative to the female applicant—by computing the ratio of favorable thoughts about the male applicant to favorable thoughts about the female applicant (adding one to each value to avoid divisions by zero).

We found a significant effect of the gender stereotype prime. Participants had relatively more favorable thoughts about the male (relative to female) applicant in the gender stereotype prime condition (M = 1.27) than in the no prime condition (M = .84), F(1, 33) = 5.07, p = .031, d = .78. No other effects were significant, Fs < 1.

Hiring evaluations were highly cognitively elaborated (i.e., based upon systematic processing) regardless of personal objectivity prime condition. We examined the correlation between thought valence and hiring preferences, holding constant participant gender. Overall, the partial correlation was sizable, r = .71, p < .001. Contrary to the possibility that personal objectivity priming led to relatively shallow or heuristic judgments, the correlation was higher in the condition where participants discriminated most. That is, for participants who had been primed on a sense of personal objectivity, and for whom gender stereotypes were activated, there was a near perfect partial correlation between thought valence and hiring preference, r = .97, p < .001. This suggests that if these participants favored the male over the female applicant in their thoughts, that they were very likely to select the male over the female applicant for the job. The relevant correlation was lower in the other three conditions, r = .63, p < .001, with the difference between the two correlations proving significant, z = 2.81, p < .01.

# Funneled debriefing

No participant indicated that his or her responses might have been influenced by the sentence unscrambling task (i.e., rated the prime's influence as above the midpoint of 5 on the 1-9 scale).

# Discussion

Non-consciously priming gender stereotypes led to discrimination against a female job applicant, but only among participants made to feel objective. That is, it was only the dual combination of gender priming and objectivity priming that produced gender bias. A sense of personal objectivity made evaluators more likely to act on their stereotypic thoughts, even though those thoughts arose from a contextual manipulation rather than from their long-held beliefs.

It was not the case that self-perceived objectivity made evaluators less deliberate information processors (Fiske & Neuberg, 1990; Langer, 1989). Instead, a sense of personal objectivity made people more likely to *use* their thoughts (which had been non-consciously shaped to favor the male over the female candidate) in arriving at their hiring evaluations.

Experiment 3 did not yield a significant main effect of personal objectivity priming on gender discrimination (i.e., participants overall were no more or less likely to hire the female applicant when primed with a sense of personal objectivity). Notably, this study used a scenario in which participants chose between a male and female applicant, as opposed to evaluating *either* a male applicant or a female applicant (as in Experiments 1 and 2). Such choices heighten careful monitoring and reduce the influence of judgmental biases (Baron, 1994). Indeed, our supplementary study reported earlier, which used the same within-subject hiring scenario as Experiment 3, likewise found no significant main effect of the personal objectivity prime, B < 1. At the same time, it is notable that in both studies, personal objectivity priming led participants to act on their stereotypic biases even when they explicitly chose between a male and female applicant.

While Experiment 1 documented a main effect of personal objectivity priming on gender discrimination (such that it increased discrimination against women), together each of the subsequent studies makes it clear that this effect occurs under the predicted theoretical conditions: when judgment makers hold at least modestly stereotypical beliefs and/or when stereotypic thoughts are experimentally manipulated to be cognitively accessible for judgment makers (as they were in this final study).

# General discussion

When people see themselves as objective, they may adopt an "I think it, therefore it's true" mindset (see also Armor, 1999; Pronin et al., 2004; Robinson et al., 1995; Ross & Ward, 1996). They may see their thoughts and beliefs as, by definition, objective and as therefore worthy of being acted on. The present studies explored the consequences of this mindset for gender discrimination in an organizational context. Consistent with expectations, a sense of personal objectivity led people to act on group-based biases they might have otherwise suppressed or held with greater tentativeness. These effects were found with both college students (Experiments 2 and 3) and laypeople (Experiment 1), when male and female applicants were evaluated separately (Experiments 1 and 2) and at the same time (Experiment 3), and for hiring evaluations involving several different jobs (police chief, factory manager, and company representative). Experiments 2 and 3 further showed that personal objectivity priming led to discrimination precisely under the conditions where it theoretically should—i.e., when individuals endorsed stereotypic beliefs (Experiment 2) and when gender stereotypes had been made cognitively accessible (Experiment 3). Ironically, feeling objective made people more subjective.

That self-perceived objectivity can facilitate hiring discrimination has both theoretical and pragmatic implications. It suggests that organizational contexts in which evaluators are encouraged to view themselves as objective may lead them to express their personal biases. For example, the practice of wearing lab coats in laboratory settings may make people feel that they are dispassionately rational, leading them to act on stereotypic beliefs and thoughts that they might have. And the use of certain formal titles in professional and organizational contexts (e.g., sir, director, professor) may implicitly instigate a sense that one's judgmental tendencies are above reproach. Simply advancing in the corporate hierarchy may further give rise to a sense of objectivity. This may be beneficial in contexts where one's beliefs and intuitions have proven to be accurate, profitable, or otherwise adaptive. But it may be detrimental when over-extended, in contexts where one's beliefs and intuitions are biased by prejudices. Given this, it may be important to teach people to view their beliefs and intuitions as subjective and subject to bias. Doing so may contribute to a more egalitarian workplace.

More generally, the present results indicate that the rational actor ideal can exacerbate bias when it is applied descriptively. When people believe that they are objective, rational actors, they may be more likely to do what they think is correct, and at the same time less likely to take into account alternative viewpoints. However, as Study 3 indicates, what people think is correct can arise not simply from stereotypic beliefs, but from incidental, environmentally primed concepts like "pink" and "Barbie".

A sense of personal objectivity may help explain why and when people act their biases—whether those biases arise from social stereotypes, moral intuitions (Haidt, 2001; Sunstein, 2005), or decision-making errors such as the sunk cost fallacy (Arkes & Blumer, 1985). In addition, a sense of personal objectivity may partly account for a number of different licensing effects (i.e., variables that lead people to feel disinhibited about expressing their biases; Monin & Miller, 2001; Sechrist & Stangor, 2002).

# The potential role of self-perceived objectivity in other licensing effects

It seems possible that self-perceived objectivity plays a role in other circumstances known to disinhibit social behavior, such as situational power (Fiske, 1993; Goodwin, Gubin, Fiske, & Yzerbyt, 2000; Keltner, Gruenfeld, & Anderson, 2002). For example, first writing about a time when they felt powerful increased the likelihood that participants would turn off an annoving fan left on by the experimenter (Galinsky, Gruenfeld, & Magee, 2003). Individuals made to feel powerful by sitting in an administrator's chair were more likely to act on their preexisting competitive or communal impulses (Chen, Lee-Chai, & Bargh, 2001). Men prone to sexual harassment who were subliminally primed with words related to power found a female confederate more physically attractive (Bargh, Raymond, Pryor, & Strack, 1995). And in general, men in positions of power tend to stereotype female subordinates (Vescio, Gervais, Snyder, & Hoover, 2005; Vescio, Snyder, & Butz, 2003). Power may increase the correspondence between private beliefs and public behavior partly by inducing a sense that one is objective. Having attained a position of power implies that one is especially qualified to make the judgments and decisions associated with the obtained role. This message may explicitly or implicitly prime a sense of personal objectivity, licensing powerful individuals to act on their personal beliefs.

Past research also shows that the perceived normativeness of one's attitudes has a large influence on attitude-behavior correspondence (Sechrist & Stangor, 2002). When individuals believe that others agree with their attitudes, they act on them more. For instance, White students told that most other college students agreed with their racial attitudes evidenced a highly significant correlation between their racial attitudes and the distance they sat from a Black confederate. But when the normativeness of participants' racial attitudes had not been conveyed, little attitude-behavior correspondence was found (Sechrist & Stangor, 2002). One very likely reason for such effects is that people are more willing to act on their private attitudes when they have little basis to fear public censure. Alternatively, finding out that others agree with one's opinions may validate them as objective (Festinger, 1954). Future research should examine what role, if any, self-perceived objectivity plays in the effects of situational power and of perceived consensus on the disinhibition of behavior.

The present discussion also pertains to the controversy over when attitudes predict behavior (Ross & Nisbett, 1991). Initial findings suggested that attitudes make only a trivial contribution to actual behaviors (Kelman, 1974; LaPierre, 1934; Wicker, 1969). However, later work demonstrated that properties of the attitude, such as its accessibility (Fazio & Williams, 1986), importance (Krosnick, 1988), and specificity (Ajzen & Fishbein, 1977) moderate attitude–behavior correspondence. The present findings, together with those of Keltner et al. (2002) and Sechrist and Stangor (2002), indicate that properties of the person and situation alike influence whether an individual's attitudes find expression in his or her actions. Much of the time, external and internal pressures make people cautious about expressing their views. However, when placed in a position of power, convinced that others agree with them, and feeling objective, people more readily act on their attitudes and beliefs. Conversely, a lowly social position, perceived lack of consensus, and sense of personal subjectivity ought to reduce attitude–behavior consistency.

### Limitations and future directions

In the present research, a sense of personal objectivity was primed by asking participants to complete questionnaire items asking about their objectivity. This manipulation was designed to increase the temporary accessibility of personal objectivity beliefs (Higgins, 1996), given the likely difficulty of making people feel more objective than they already do (Armor, 1999; Pronin et al., 2002). Prior work demonstrates that using survey questions to prime ideas is both valid and effective (e.g., Katz & Hass, 1988; Sniderman & Piazza, 2002). Additionally, this relatively subtle manipulation produced statistically sizable effects—suggestive that the process is particularly potent when more impactful real-world events and organizational contexts foster a sense of personal objectivity in their populace.

The effects of affirming a sense of personal objectivity differ from the effects of affirming other self-concepts (see Sherman & Cohen, 2006, for a discussion). Previous research indicates that affirmations of personal values generally reduce discrimination (Fein & Spencer, 1997) and mitigate the cognitive accessibility of stereotypes (Spencer, Fein, Wolfe, Fong, & Dunn, 1998). However, future research should investigate other means of manipulating a sense of personal objectivity, for instance through false feedback on an ostensive test of rationality, or through subliminal conditioning of objective self-perceptions (Dijksterhuis, 2004).

Additionally, the present studies focused mainly on male evaluators (see also Norton et al., 2004). Experiment 3 and one of our supplementary studies found little to no effects of personal objectivity priming on the hiring evaluations of female participants. This could be due to reluctance on the part of female participants to discriminate against an ingroup member, perhaps as a consequence of egalitarian beliefs or feminist motivations. However, these are tentative speculations at this point. Future work should more closely examine the effects of self-perceived objectivity on the hiring evaluations of female evaluators.

Some ambiguity remains as to whether gender discrimination among some participants primed with a sense of personal objectivity is driven by favoritism towards male applicants or negativity towards female applicants. In Experiment 1, gender discrimination by personal objectivity primed participants issued from favoritism toward the male applicant. But in Experiment 2, such discrimination issued from negative responses toward the female applicant. It thus remains unclear whether personal objectivity priming is more closely linked to evaluations of male or female job candidates. In the real world, however, it arguably makes little difference if gender discrimination arises from positive responses to male applicants or negative responses to female applicants. The effect—inequality in allocation of jobs and resources—is the same. In this respect, the findings are quite consistent. A sense of personal objectivity can increase discrimination in favor of male relative to female job candidates, particularly among evaluators who endorse stereotypic beliefs or who have been non-consciously primed with gender stereotypes.

It would be interesting to examine whether a sense of personal objectivity can lead evaluators to discriminate against male applicants for jobs that women are stereotypically better at (e.g., a kindergarten teacher, nurse, or nanny). We hypothesize that to the extent that evaluators believe women would be on average more effective at a job than men, a sense of personal objectivity should lead to favoritism towards female applicants.

The present studies focused largely on hiring judgments (i.e., hiring evaluations) rather than actual choices, which prior work has demonstrated can vary from judgments in systematic ways. For example, decoy effects are more readily observed in choices than in judgments (Pettibone & Wedell, 2000). Future work should directly compare judgments and choices made in hiring contexts. Future research should further examine how both judgments and choices play out in hiring situations in actual organizations. Some aspects of real-world situations, such as accountability (Lerner & Tetlock, 1999), may reduce the expression of stereotypic beliefs. On the other hand, people may also be less likely to monitor their judgments outside an experimental context, where their judgments are unlikely to be subjected to careful scientific scrutiny. This might amplify the effects of both gender stereotypes and temporarily accessible objectivity beliefs in real-world contexts.

One potential mechanism of the "I think it, therefore it's true" effect that is worth investigating is the tendency to automatically assume that information is true (Gilbert, Krull, & Malone, 1990; Gilbert, Tafarodi, & Malone, 1993; for a review, see Gilbert, 1991). As Gilbert and his colleagues have elegantly demonstrated, comprehending new information requires an initial acceptance of its validity; disbelieving it requires a second step of mental correction. People initially believe information is true and only later decide that it is false. When it comes to evaluating the ideas that come to mind, individuals convinced of their objectivity may be less likely to get to take that second step. Thus, basic properties of how the mind comprehends and validates information may be implicated in the tendency for judgment makers convinced of their objectivity to act on their biases. Future research should examine this and other potential mediators of the effects of self-perceived objectivity.

### Conclusion

Current theories emphasize the ambivalent (Katz & Hass, 1988), covert (Snyder et al., 1979), and repressed (Gaertner & Dovidio, 1986) nature of contemporary attitudes towards social groups. The present studies complement this work by examining when people feel licensed to express their biases. When people feel that they are objective, rational actors, they act on their group-based biases more rather than less. The research presented here is among the first to demonstratethrough experimental manipulation-a causal link between self-perceived objectivity and judgmental bias. This is a relationship posited in previous research on naïve realism (Pronin et al., 2004; Robinson et al., 1995). Feeling objective appears to makes people more likely to act on their stereotypic biases. Indeed, from the actor's perspective, it may seem rational to act on stereotypic thoughts that, though they may arise from incidental environmental cues, subjectively feel like objective reflections of reality (see also Pronin & Kugler, 2007). Such psychological licensing helps to explain the persistence of discrimination in organizational contexts despite personal and institutional pressures towards egalitarianism.

### References

- Ajzen, I., & Fishbein, M. (1977). Attitude–behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, 84, 888–918.
- Arkes, H., & Blumer, C. (1985). The psychology of sunk cost. Organizational Behavior and Human Decision Process, 35, 124–140.
- Armor, D. A. (1999). The illusion of objectivity: Bias in the belief in freedom from bias. Doctoral dissertation, University of California Los Angeles.
- Banaji, M. R., Hardin, C., & Rothman, A. J. (1993). Implicit stereotyping in person judgment. *Journal of Personality and Social Psychology*, 65, 272–281.
- Bargh, J. A., & Chartrand, T. L. (2000). The mind in the middle: A practical guide to priming and automaticity research. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 253–285). New York: Cambridge University Press.
- Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype activation

on action. Journal of Personality and Social Psychology, 71, 230-244.

- 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.
- Bargh, J. A., Raymond, P., Pryor, J. B., & Strack, F. (1995). Attractiveness of the underling: An automatic power sex association and its consequences for sexual harassment and aggression. *Journal of Personality and Social Psychology*, 68, 768–781.
- Baron, J. (1994). Nonconsequentialist decisions. *Behavioral and Brain Sciences*, 17, 1–10.
- Batson, C. D., Flink, C. H., Schoenrade, P. A., Fultz, J., & Pych, V. (1986). Religious orientation and overt versus covert racial prejudice. *Journal of Personality and Social Psychology*, 50, 175–181.
- Becker, G. S. (1957). *The economics of discrimination*. Chicago: Chicago University press.
- Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.). Advances in experimental social psychology (Vol. 6, pp. 1–62). New York: Academic Press.
- Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review*, 94, 991–1013.
- Biernat, M., & Kobrynowicz, D. (1997). Gender- and race-based standards of competence: Lower minimum standards but higher ability standards for devalued groups. *Journal of Personality and Social Psychology*, 72, 544–557.
- Briñol, P., Petty, R. E., & Tormala, Z. L. (2004). The self-validation of cognitive responses to advertisements. *Journal of Consumer Research*, 30, 559–573.
- Cacioppo, J. T., & Petty, R. E. (1981). Social psychological procedures for cognitive response assessment: The thought-listing technique. In T. V. Merluzzi, C. R. Glass, & M. Genest (Eds.), *Cognitive* assessment (pp. 309–342). New York: Guilford.
- Cacioppo, J. T., Petty, R. E., Kao, C., & Rodriguez, R. (1986). Central and peripheral routes to persuasion: An individual difference perspective. *Journal of Personality and Social Psychology*, 51, 1032–1043.
- Chaiken, S., & Maheswaran, D. (1994). Heuristic processing can bias systematic processing: Effects of source credibility, argument ambiguity, and task importance on attitude judgment. *Journal of Personality and Social Psychology*, 66, 460–473.
- Chen, S., Lee-Chai, A. Y., & Bargh, J. A. (2001). Relationship orientation as a moderator of the effects of social power. *Journal of Personality and Social Psychology*, 80, 173–187.
- Cohen, G. L. (2003). Party over policy: The dominating impact of group influence on political beliefs. *Journal of Personality and Social Psychology*, 85, 808–822.
- Conover, W. J., & Iman, R. L. (1981). Rank transformations as a bridge between parametric and nonparametric statistics. *The American Statistician*, 35, 124–129.
- Crandall, C. S., & Eshleman, A. (2003). A justification-suppression model of the expression and experience of prejudice. *Psychological Bulletin*, 129, 414–446.
- DeSteno, D., Bartlett, M., Braverman, J., & Salovey, P. (2002). Sex differences in jealousy: Evolutionary mechanism or artifact of measurement? *Journal of Personality and Social Psychology*, 83, 1103–1116.
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychol*ogy, 56, 5–18.
- Devine, P. G., Monteith, M. J., Zuwerink, J. R., & Elliot, A. J. (1991). Prejudice with and without compunction. *Journal of Personality* and Social Psychology, 60, 817–830.

- Dijksterhuis, A. (2004). I like myself but I don't know why: Enhancing implicit self- esteem by subliminal evaluative conditioning. *Journal* of Personality and Social Psychology, 86, 345–355.
- Dijksterhuis, A., & Bargh, J. A. (2001). The perception-behavior expressway: The automatic effects of social perception on social behavior. In M. P. Zanna (Ed.). Advances in experimental social psychology (Vol. 33, pp. 1–40). San Diego, CA: Academic Press.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109, 573–598.
- Epley, N., & Dunning, D. (2000). Feeling "holier than thou": Are selfserving assessments produced by errors in self- or social prediction? *Journal of Personality and Social Psychology*, 79, 861–875.
- Fazio, R. H., & Williams, C. J. (1986). Attitude accessibility as a moderator of the attitude-perception and attitude-behavior relations: An investigation of the 1984 presidential election. *Journal of Personality and Social Psychology*, 51, 505–514.
- Fazio, R. H., & Zanna, M. P. (1978). Attitudinal qualities relating to the strength of the attitude–behavior relationship. *Journal of Experimental Social Psychology*, 14, 398–408.
- Fein, S., & Spencer, S. J. (1997). Prejudice as self-image maintenance: Affirming the self through derogating others. *Journal of Personality* and Social Psychology, 73, 31–44.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117–140.
- Festinger, L. (1957). *Theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Fischhoff, B. (1975). Hindsight is not equal to foresight: The effect of outcome knowledge on judgment under uncertainty. *Journal of Experimental Psychology: Human Perception and Performance*, 1, 288–299.
- Fiske, S. T. (1993). Controlling other people: The impact of power on stereotyping. *American Psychologist*, 48, 621–628.
- Fiske, S., & Neuberg, S. (1990). A continuum of impression formation, from category-based to individuating processes: Influences of information and motivation on attention and interpretation. *Advances in Experimental Social Psychology*, 23, 1–73.
- Gaertner, J. L., & Dovidio, J. F. (1986). The aversive form of racism. In J. F. Dovidio & J. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 61–89). New York: Academic Press.
- Galinsky, A. D., Gruenfeld, D. H., & Magee, J. C. (2003). From power to action. Journal of Personality and Social Psychology, 85, 453–466.
- Gilbert, D. T. (1991). How mental systems believe. American Psychologist, 46, 107–119.
- Gilbert, D. T., Krull, D. S., & Malone, P. S. (1990). Unbelieving the unbelievable: Some problems in the rejection of false information. *Journal of Personality and Social Psychology*, 59, 601–613.
- Gilbert, D. T., Tafarodi, R. W., & Malone, P. S. (1993). You can't not believe everything you read. *Journal of Personality and Social Psychology*, 65, 221–233.
- Glick, P., & Fiske, S. T. (1996). The Ambivalent Sexism Inventory: Differentiating hostile and benevolent sexism. *Journal of Personality and Social Psychology*, 70, 491–512.
- Glick, P., Zion, C., & Nelson, C. (1988). What mediates sex discrimination in hiring decisions? *Journal of Personality and Social Psychology*, 55, 178–186.
- Goodwin, S. A., Gubin, A., Fiske, S. T., & Yzerbyt, V. Y. (2000). Power can bias impression processes: Stereotyping subordinates by default and by design. *Group Processes and Intergroup Relations*, 3, 227–256.
- Greenwald, A. G. (1976). Within-subjects designs: To use or not to use? *Psychological Bulletin*, 83, 314–320.
- Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review*, 108, 814–834.
- Higgins, E. T. (1996). Knowledge activation: Accessibility, applicability, and salience. In E. T. Higgins & A. W. Kruglanski (Eds.),

*Social psychology: Handbook of basic principles* (pp. 133–168). New York, NY: The Guilford Press.

- Hodson, G., Dovidio, J. F., & Gaertner, S. L. (2002). Processes in racial discrimination: Differential weighting of conflicting information. *Personality and Social Psychology Bulletin*, 28, 460–471.
- Jacobs, J. A. (1992). Women's entry into management: Trends in earnings, authority, and values among salaried managers. *Admin*istrative Science Quarterly, 37, 282–301.
- Jost, J. T. (1997). An experimental replication of the depressedentitlement effect among women. *Psychology of Women Quarterly*, 21, 387–393.
- Kasof, J. (1993). Sex bias in the naming of stimulus persons. *Psychological Bulletin, 113,* 140–163.
- Katz, I., & Hass, R. G. (1988). Racial ambivalence and American value conflict: Correlational and priming studies of dual cognitive structures. *Journal of Personality and Social Psychology*, 55, 893–905.
- Kelman, H. C. (1974). Attitudes are alive and well and gainfully employed in the sphere of action. *American Psychologist, 29*, 310–324.
- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2002). Power, approach, and inhibition. *Psychological Review*, 110, 265–284.
- Kenworthy, J. B., & Miller, N. (2002). Attributional biases about the origins of attitudes: Externality, emotionality, and rationality. *Journal of Personality and Social Psychology*, 82, 693–707.
- Krosnick, J. A. (1988). The role of attitude importance in social evaluation: A study of policy preferences, presidential candidate evaluations, and voting behavior. *Journal of Personality and Social Psychology*, 55, 196–210.
- Kruglanski, A. W., & Webster, D. M. (1996). Motivated closing of the mind: "Seizing" and "freezing". *Psychological Review*, 103, 263–283.
- Kunda, Z., & Thagard, P. (1996). Forming impressions from stereotypes, traits and behaviors: A parallel-constraint-satisfaction theory. *Psychological Review*, 103, 284–308.
- Langer, E. (1989). Mindfulness. Massachusetts: Addison-Wesley.
- LaPierre, R. T. (1934). Attitude and actions. Social Forces, 1, 230-237.
- Lerner, J. S., & Tetlock, P. E. (1999). Accounting for the effects of accountability. *Psychological Bulletin*, 125, 255–275.
- Lichtenstein, S., & Slovic, P. (1973). Response-induced reversals of preference in gambling: An extended replication in Las Vegas. *Journal of Experimental Psychology*, 101, 16–20.
- Locksley, A., Borgida, E., Brekke, N., & Hepburn, C. (1980). Sex stereotypes and social judgment. *Journal of Personality and Social Psychology*, 39, 821–831.
- Locksley, A., Hepburn, C., & Ortiz, V. (1982). Social stereotypes and judgments of individuals. *Journal of Experimental Social Psychol*ogy, 18, 23–42.
- Lord, C. G., Ross, L., & Lepper, M. R. (1979). Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence. *Journal of Personality and Social Psychology*, 37, 2098–2109.
- Lyness, K. S., & Judiesch, M. K. (1999). Are women more likely to be hired or promoted into management positions? *Journal of Vocational Behavior*, 54, 158–173.
- Lyness, K. S., & Thompson, D. E. (1997). Above the glass ceiling? A comparison of matched samples of female and male executives. *Journal of Applied Psychology*, 82, 359–375.
- Monin, B., & Miller, D. T. (2001). Moral credentials and the expression of prejudice. *Journal of Personality and Social Psychol*ogy, 81, 33–43.
- Norton, M. I., Vandello, J. A., & Darley, J. M. (2004). Casuistry and social category bias. *Journal of Personality and Social Psychology*, 87, 817–831.
- Pettibone, J. C., & Wedell, D. H. (2000). Examining models of nondominated decoy effects across judgment and choice. Organizational Behavior and Human Decision Processes, 81, 300–328.

- Petty, R. E., Briñol, P., & Tormala, Z. L. (2002). Thought confidence as a determinant of persuasion: The self-validation hypothesis. *Journal of Personality and Social Psychology*, 82, 722–741.
- Pronin, E., & Kugler, M. B. (2007). Valuing thoughts, ignoring behavior: The introspection illusion as a source of the bias blind spot. *Journal of Experimental Social Psychology*, 43, 565–578.
- Pronin, E., Gilovich, T., & Ross, L. (2004). Objectivity in the eye of the beholder: Perceptions of bias in self versus others. *Psychological Review*, 111, 781–799.
- Pronin, E., Kruger, J., Savitsky, K., & Ross, L. (2001). You don't know me, but I know you: The illusion of asymmetric insight. *Journal of Personality and Social Psychology*, 81, 639–656.
- Pronin, E., Lin, D. Y., & Ross, L. (2002). The bias blind spot: Perceptions of bias in self versus others. *Personality and Social Psychology Bulletin*, 28, 369–381.
- Pyszczynski, T., & Greenberg, J. (1987). Toward an integration of cognitive and motivational perspectives on social inference: A biased hypothesis-testing model. In L. Berkowitz (Ed.). Advances in experimental social psychology (Vol. 20, pp. 297–340). San Diego, CA: Academic Press.
- Reskin, B. F., & Ross, C. E. (1995). Jobs, authority, and earnings among managers: The continuing significance of sex. In J. A. Jacobs (Ed.), *Gender inequality at work* (pp. 127–151). Thousand Oaks, CA: Sage.
- Robinson, R. J., Keltner, D., Ward, A., & Ross, L. (1995). Actual versus assumed differences in construal: "Naive realism" in intergroup perception and conflict. *Journal of Personality and Social Psychology*, 68, 404–417.
- Ross, L., & Nisbett, R. E. (1991). The person and the situation: Perspectives of social psychology. New York, NY: Mcgraw-Hill.
- Ross, L., & Ward, A. (1996). Naive realism in everyday life: Implications for social conflict and misunderstanding. In E. S. Reed & E. Turiel (Eds.), *Values and knowledge* (pp. 103–135). Hillsdale, NJ: Lawrence Erlbaum.
- Rudman, L. A. (1998). Self-promotion as a risk factor for women: The costs and benefits of counterstereotypical impression management. *Journal of Personality and Social Psychology*, 74, 629–645.
- Rudman, L. A., & Glick, P. (1999). Feminized management and backlash toward agentic women: The hidden costs to women of a kinder, gentler image of middle managers. *Journal of Personality* and Social Psychology, 77, 1004–1010.
- Sears, D. O., Henry, P. J., & Kosterman, R. (2000). Egalitarian values and contemporary racial politics. In D. O. Sears, J. Sidanius, & L. Bobo (Eds.), *Racialized politics: The debate about racism in America*. Chicago: University of Chicago Press.

- Sechrist, G. B., & Stangor, C. (2002). Perceived consensus influences intergroup behavior and stereotype accessibility. *Journal of Per*sonality and Social Psychology, 80, 645–654.
- Sherman, D. K., & Cohen, G. L. (2006). The psychology of selfdefense: Self-affirmation theory. In M. P. Zanna (Ed.). Advances in Experimental Social Psychology (Vol. 38, pp. 183–242). San Diego, CA: Academic Press.
- Sidanius, J., & Pratto, F. (1999). Social dominance: An intergroup theory of social hierarchy and oppression. New York: Cambridge University Press.
- Sniderman, P. M., & Piazza, T. (2002). Black pride and black prejudice. Princeton, N.J: Princeton University Press.
- Snyder, M. L., Kleck, R. E., Strenta, A., & Mentzer, S. J. (1979). Avoidance of the handicapped: An attributional ambiguity analysis. *Journal of Personality and Social Psychology*, 37, 2297–2306.
- Spencer, S. J., Fein, S., Wolfe, C. T., Fong, C., & Dunn, M. A. (1998). Automatic activation of stereotypes: The role of self-image threat. *Personality and Social Psychology Bulletin*, 24, 1139–1152.
- Srull, T. K., & Wyer, R. S. (1979). The role of category accessibility in the interpretation of information about persons: Some determinants and implications. *Journal of Personality and Social Psychol*ogy, 37, 1660–1672.
- Sunstein, C. (2005). Moral heuristics. *Behavioral and Brain Sciences*, 28, 531–542.
- Swim, J. K., Aikin, K. J., Hall, W. S., & Hunter, B. A. (1995). Sexism and racism: Old-fashioned and modern prejudices. *Journal of Personality and Social Psychology*, 68, 199–214.
- Tormala, Z. L., & Petty, R. E. (2004). Source credibility and attitude certainty: A metacognitive analysis of resistance to persuasion. *Journal of Consumer Psychology*, 14, 426–441.
- Uhlmann, E. L., & Cohen, G. L. (2005). Constructed criteria: Redefining merit to justify discrimination. *Psychological Science*, 16, 474–480.
- Vescio, T. K., Gervais, S. J., Snyder, M., & Hoover, A. (2005). Power and the creation of patronizing environments: The stereotypebased behaviors of the powerful and their effects on female performance in masculine domains. *Journal of Personality and Social Psychology*, 88, 658–672.
- Vescio, T. K., Snyder, M., & Butz, D. A. (2003). Power in stereotypically masculine domains: A social influence strategy × stereotype match model. *Journal of Personality and Social Psychology*, 85, 1062–1078.
- Wicker, A. W. (1969). Attitudes versus actions: The relationship of verbal and overt behavioral responses to attitude objects. *Journal* of Social Issues, 25, 41–78.
- World Bank. (2001). Engendering development through gender equality in rights, resources and voice. New York: Oxford University Press.