

Man, I Feel Like a Woman: When and How Gender-Role Motivation Helps Mind-Reading

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Two experiments were undertaken with 3 goals: (a) to determine whether manipulating the desirability of including empathy as part of one's gender-role identity motivates accurate mind-reading, (b) to ascertain whether target readability moderates the strength of this effect, and (c) to test whether these effects are mediated by the complexity of perceivers' inferential strategies. Participants viewed videotapes of 2 couples discussing relationship problems and attempted to infer each partner's thoughts and feelings. Both experiments demonstrated that motivation improved accuracy when male and female perceivers valued the empathy-relevant aspects of the traditional female gender role. However, as predicted, high levels of motivation facilitated the accurate reading of easy targets but not of difficult targets. Several mediational models were tested, the results of which showed that the complexity of perceivers' attributions mediated the link between motivation and mind-reading accuracy.

Keywords: Mind-reading, accuracy, motivation, empathic, empathy

Conventional wisdom dictates that highly motivated perceivers who devote greater effort to understanding others should reap the benefits of greater accuracy. Similarly, behavioral scientists have long regarded motivation as a necessary, if not sufficient, condition for effective performance, particularly on tasks that require considerable application or persistence (e.g., R. M. Gagné & Fleishman, 1959; Vroom, 1964). Yet the extant evidence for the impact of motivation on *mind-reading accuracy*—the capacity to accurately “read” (or infer) others' thoughts and feelings as they occur during interactions—has yielded diverse effects.

Many lines of research in social cognition have converged in distinguishing between two basic motivational mind-sets that guide reasoning processes: the motive to reach a desirable and esteem-enhancing conclusion versus the motive to reach an accurate and realistic conclusion (e.g., Chaiken, Giner-Sorolla, & Chen, 1996; Kruglanski, 1989; Kunda, 1990; Sorrentino & Higgins, 1986). Recent theorizing and research on the accuracy of mind-reading (or *empathic accuracy*, as it is also termed) has accorded a prominent role for the former esteem-enhancing motive. The Ickes and Simpson's empathic accuracy model, for example, posits that perceivers are motivated to manage mind-reading accuracy in close relationships so that, in the face of threatening information, they shift from an inferential accuracy mind-set to a motivated inaccuracy mind-set (see Ickes & Simpson, 1997, 2001). Accordingly, Simpson, Ickes, and Blackstone

(1995) found that when participants viewed their relationship as insecure and situationally threatened, they seemingly tried to protect themselves by denying or otherwise failing to acknowledge their partners' true feelings of attraction to potential alternative partners. In other words, high motivation was shown to undermine accuracy when it was devoted to the goal of defending the self or one's relationship from undesirable conclusions (cf. Simpson, Ickes, & Grich, 1999).

Surprisingly little attention, however, has concentrated on the alternate truth-seeking kind of motivation that may facilitate mind-reading accuracy (Fletcher & Thomas, 1996; F. M. Gagné & Lydon, 2004; Thomas & Fletcher, 1997). Attaining high levels of mind-reading accuracy is a cognitively demanding task, and hence, motivated accuracy may not necessarily improve the quality of empathic judgments for all perceivers or when inferring all targets. Nonetheless, there is suggestive evidence that mind-reading accuracy is related to certain kinds of motivational factors such as the targets' physical attractiveness (Ickes, Stinson, Bissonnette, & Garcia, 1990) and performance-related payment (Klein & Hodges, 2001). In addition, mind-reading accuracy is related to perceivers' apparent effort to track the targets' thoughts and feelings as they ebb and flow during an interaction (Thomas, Fletcher, & Lange, 1997). More relevant to the present investigation, motivational factors have been regarded as crucial to reconciling the inconsistent pattern of gender differences in mind-reading accuracy found across studies. In a recent meta-analysis, Ickes, Gesn, and Graham (2000) found that women's superior mind-reading emerged only in situations where participants estimated their level of accuracy after each mind-reading inference. Graham and Ickes (1997) suggested that this estimation task seemingly motivated women to attain levels of accuracy higher than those of men. The logic of this motivational explanation is that this task raises women's awareness of their traditional empathy-relevant gender-role obligations, thereby motivating them to outperform men. Although speculative, this explanation is bolstered by further evidence that (a) women's

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empathic advantage is evident only when perceivers' sympathy for the target is measured prior to mind-reading (Klein & Hodges, 2001), (b) women routinely demonstrate greater self-reported empathic ability and sensitivity than men (but not when empathy is measured unobtrusively; see Eisenberg & Lennon, 1983), and (c) interdependence and empathy are more integral to women's self-concept than to men's (see Cross & Madson, 1997).

Although such findings add credence to the claim that empathy-relevant gender identity can affect accuracy, the role of empathy-relevant gender identity in prior studies has been largely implied rather than directly measured or experimentally manipulated. Therefore, in the present research we directly manipulated gender-role identity as a motive for accuracy. Specifically, we highlighted a deficiency in participants' gender-role reputation in terms of their level of mind-reading ability and then endorsed the value of empathic ability, thereby motivating them to perform better in order to defend or debunk their gender-role reputation and manifest their "true" level of mind-reading ability. We anticipated that women, as opposed to men, would show higher levels of mind-reading accuracy with this instruction because empathy is more central to their self-identity or collective identity. Furthermore, if empathy is so strongly tied to feminine abilities then it would be interesting to see if convincing men of the importance of being more feminine would increase their mind-reading performance.

A Boundary Condition of Motivated Mind-Reading Accuracy

To address the important question of what might moderate the influence of motivation on judgment accuracy, we were guided by two recent accuracy theories: Funder's (1995) realistic accuracy model (RAM) and Ickes and Simpson's (1997, 2001) empathic accuracy model. Both models view judgment accuracy as emanating from the sending and reading of valid cues. More specifically, RAM states that the traits (or mental states) of others can be accurately inferred if relevant behavioral cues are made available to the perceiver and if the perceiver detects and appropriately utilizes these cues. Moreover, each model highlights the importance of perceiver-based and target-based moderators in influencing accuracy, by virtue of their effects on each step of the judgment process just outlined. For example, perceiver motivation must facilitate accurate mind-reading by enabling better detection and utilization of valid (rather than invalid) cues. In terms of target-based moderators, there is compelling evidence that certain targets are easier to read than others, because they send clearer and more consistent behavioral cues that are diagnostic of their underlying thoughts and feelings during an interaction (Gesn & Ickes, 1999; Marangoni, Garcia, Ickes, & Teng, 1995; cf. Thomas & Fletcher, 2003). On the basis of this logic, we hypothesize that the effect of perceiver motivation on accuracy should be constrained by the extent to which targets manifest valid and diagnostic behavioral cues.

To date, the interaction between perceiver motivation and target readability has not been directly examined; however, there is research that may help illuminate the nature of this interaction. Indeed, several lines of research in social cognition converge to show that high levels of motivation enhance accuracy when judgments are relatively easy but have no effect or even impede accuracy when judgments are relatively difficult (see Pelham &

Neter, 1995, for a review). Studies of mind-reading accuracy, in particular, are broadly consistent with this view. Gesn and Ickes (1999) found that schema-driven, as opposed to data-driven, judgments facilitated accuracy for the relatively easy task of inferring schema-consistent thoughts and feelings but impeded accuracy for the more difficult process of inferring schema-inconsistent thoughts and feelings. More directly relevant for the present research, Klein and Hodges (1999, as cited in Klein & Hodges, 2001) primed target sympathy and found gender differences in mind-reading accuracy for female but not male targets. The authors concluded that this target effect was due to female targets being easier to read than male targets. Neither Gesn and Ickes nor Klein and Hodges directly manipulated target readability, however. Thus, despite the prominent role accorded to target readability by extant models of accuracy, it has not yet been determined whether the effect of target readability on mind-reading accuracy is moderated by relevant motivation.

To test whether target readability moderates the effect of motivation on judgment accuracy, we experimentally manipulated target readability in the present studies, using prior ratings by naive observers obtained from an earlier study (Thomas & Fletcher, 2003). We selected 2 stimulus targets (male and female) who provided behavior highly diagnostic of their inner thoughts and feelings and 2 who provided ambiguous or misleading behavioral cues that were less diagnostic of their underlying mental states. We expected that higher levels of motivation would facilitate the accuracy of easy-to-read targets for both male and female perceivers. In contrast, the effect of motivated accuracy on difficult targets was expected to be less beneficial. At first glance, previous research on more challenging judgment tasks has produced mixed results, with motivation having no effect or even impeding accuracy. According to Pelham and Neter (1995), deleterious effects of motivated accuracy have typically been found when tasks were framed in difficult terms, with nondiagnostic cues interspersed with diagnostic cues, and also when perceivers were placed under time pressure. If this reasoning holds, then it is the combined effect of having to perform an intractable task, in extreme haste, that disrupts the process of accurate judgment. Although perceivers in our experiments inferred intrinsically difficult targets, they were not asked to do so under conditions of high cognitive load. Indeed, research suggests that when perceivers are given ample time to make complex judgments the effect of motivation on accuracy is more benign (e.g., Quattrone, 1982). Hence, high levels of motivated accuracy may simply have no effect on the reading of difficult targets in our experimental conditions.

How Does Motivation Influence Mind-Reading Accuracy?

Another important novel aim of the current experiments was to examine precisely how motivation affects accuracy. Extant research has tended to focus on the predictors of mind-reading accuracy without considering the underlying process of how such accuracy is attained. To our knowledge, the few studies that have tested process models of accuracy (e.g., Simpson et al., 1995; Thomas et al., 1997) have typically focused on the detection stage rather than the utilization stages of RAM. Therefore, the research literature is largely silent on the kinds of judgment strategies that may facilitate superior mind-reading performance.

However, numerous process models of social cognition have postulated that high motivation affects perceivers' inclination to engage in more systematic and elaborate cognitive processing of information (e.g., Chaiken, Liberman, & Eagly, 1989; Fazio, 1990; Petty & Cacioppo, 1986; Thompson, Kruglanski, & Spiegel, 2000). Consistent with this view, experimentally induced motivation has been shown to increase the amount and sophistication of cognitive processing in the domains of persuasion and person perception (see Pelham & Neter, 1995, for a review). In addition, Davis and Kraus's (1997) meta-analytic review demonstrated that measures of cognitive complexity were the best predictors of judgment accuracy, and complexity has been shown to inoculate perceivers from well established errors and biases (e.g., Fletcher, Reeder, & Bull, 1990; Tetlock, 1985; Tetlock & Kim, 1987). On the basis of the logic of RAM, perceivers who adopt a careful and systematic mind-set may be particularly sensitive to diagnostic behavioral cues and especially effective at integrating such cues to derive judgments that are more accurate, as long as targets send valid cues in the first place. Therefore, cognitive complexity is a good candidate to mediate the motivated accuracy effect.

Our research concentrated on two well established forms of cognitive complexity that could be implicated in the process of motivated mind-reading accuracy: differentiation and integration (Fletcher, Danilovics, Fernandez, Peterson, & Reeder, 1986; Tetlock & Kim, 1987). Broadly speaking, differentiation corresponds to the quantity dimension of cognitive complexity and is typically defined as the number of evaluatively distinct dimensions of a problem considered by the perceiver. In the present research, we considered two indices of differentiation: the number of independent hypotheses generated and the number of distinct emotions inferred. We proposed that enhanced motivation might lead to highly differentiated inferences, as perceivers consider a wider variety of hypotheses and emotions, which might in turn lead to increased accuracy when reading easy targets. Integration, on the other hand, taps into the quality dimension of cognitive complexity. We relied on Fletcher et al.'s (1986) fine-grained conceptualization of integration (hereafter referred to as *attributional complexity*), which includes the presence of attributional metacognitive thinking; complex internal, external, and temporal attributions; inferences of attitudinal ambivalence; and complex causal reasoning. We postulated that highly motivated perceivers would generate more complex and sophisticated mind-reading attributions, which would lead to greater accuracy for the easy-to-read targets.

Research Overview and Hypotheses

We conducted two experiments to test predictions from our theoretical framework about when and how motivation influences mind-reading accuracy. In each experiment, we measured mind-reading using the standard stimulus paradigm (Ickes, Buysse, et al., 2000), in which participants viewed a standard set of videotapes depicting couples discussing genuine problems in their relationships and attempted to read the thoughts and feelings of the same target persons (e.g., Gesn & Ickes, 1999; Marangoni et al., 1995; Thomas & Fletcher, 2003). Two of the target dating partners in these videotapes were easy to read and two were difficult to read (the *target readability manipulation*). The mind-reading criterion consisted of the actual self-reported thoughts and feelings of the dating partners that occurred during the course of their videotaped

interaction. Mind-reading accuracy was calculated by independent raters who judged the similarity between each of the actual thoughts and feelings and the corresponding thought and feeling inferences generated by each participant.

The procedures for each of the two experiments were similar except for the way that motivation was manipulated. In Experiment 1, we sought to establish that the motivated accuracy effect could be induced in women by threatening their traditional reputation as superior mind-readers. In Experiment 2, we sought to further test the gender-role identity hypothesis by examining whether the motivated accuracy effect could be induced in men who were persuaded to embrace the empathy-relevant aspects of the traditional feminine gender role. Across both experiments, we predicted that the influence of motivation on mind-reading would facilitate the reading of easy targets but have no effect on the reading of difficult targets (i.e., moderation by target readability). Finally, we tested various mediational models in which complexity-level variables, such as attributional complexity and differentiation, mediated the link between motivation and mind-reading accuracy for easy, but not difficult, targets (i.e., mediation by cognitive complexity).

Experiment 1

Method

Participants and Design

Participants were 52 female psychology undergraduate students from a British University who received course credit for their participation. The experimental design was a 2×2 mixed factorial. Motivation (two levels: empathy-deficient gender identity or control) was manipulated as a between-subjects factor, and target readability (two levels: difficult to read and easy to read) was manipulated as a within-subjects factor. Participants were randomly assigned to the motivation or control conditions.

Stimulus Materials

The stimulus materials were two 5-min video excerpts of dating couples who were unknown to the participants. Each video portrayed the couples discussing a serious problem that they were currently experiencing in their relationship. The videotaped discussions and associated thought–feeling protocols had been generated during a study of 50 dating couples by Thomas and Fletcher (2003).

Preparation of the mind-reading accuracy criteria. We followed the procedure developed by Ickes et al. (1990). The dating partners were separated immediately after completing their discussions, and they independently reviewed the videotape of their discussion. Whenever partners recalled experiencing a particular thought or feeling, they paused the tape and gave a clear and candid description of those thoughts and feelings along with the times at which they occurred. The experimenter stressed the importance of describing only those thoughts and feelings that could be distinctly remembered from the discussion and not to construct new thoughts and feelings. Participants were also reassured that the content of their thoughts and feelings would remain confidential.

From the resulting thought–feeling protocols, four thought–feeling entries were selected for each of the four target dating

partners to serve as the objective criterion for assessing the accuracy of the mind-reading inferences by participants in the present study. A pilot study suggested that a total of 16 thought–feeling inferences balanced the need for measurement reliability with the need to keep the task from becoming unduly arduous or boring (so that it did not undermine the motivation manipulation).

Manipulation of target readability. The two stimulus videotaped discussions were selected on the basis of Thomas and Fletcher's (2003) ratings of dating partners' behavioral diagnosticity. In that study, two independent coders read each target's thought–feeling statements while viewing each dating couple's videotaped discussions. On the basis of verbal and nonverbal behavior presented in the 30 s leading up to each thought or feeling, coders rated how difficult it would have been for an observer to accurately infer the content of the each thought or feeling. The ratings were made on a 3-point scale where 1 was *relatively difficult to accurately infer the thought–feeling*, 2 was *neither particularly easy nor difficult to accurately infer the thought–feeling*, and 3 was *relatively easy to infer the thought–feeling*. A high level of interrater reliability was achieved ($r = .87$). The few disagreements were resolved while reexamining the taped discussions. These final ratings were tallied for each target and divided by the total number of thought–feeling statements analyzed to produce mean behavioral diagnosticity scores.

Two couples provided discussions and associated thought–feeling protocols that were ideal for our manipulation of target readability. The woman from Couple 1 and the man from Couple 2 were chosen as difficult-to-read targets because they obtained behavioral diagnosticity scores more than one standard deviation below the mean for the total sample in the Thomas and Fletcher (2003) study. It is important to note, however, that these targets were difficult but not impossible to read (Thomas & Maio, 2008). The male from the first couple and the female from the second couple were chosen as easy-to-read targets because they obtained behavioral diagnosticity scores more than one standard deviation above the mean for the sample. Hence, we were able to cleanly separate target readability from any judge-to-target gender effects, because participants judged both a difficult-to-read and easy-to-read target of each gender. In addition, by selecting two target dating couples, we were able to assess the effects of target readability across two genuinely different discussion topics. The first couple discussed the problem of incompatible values and habits, and the second discussed the difficulty of spending time together.¹

Procedure

Participants took part individually. The experimenter stated that they would be completing a study of interpersonal perception. Participants were then presented with instructions for the motivation or control condition followed by standardized instructions on how to complete the mind-reading task and a check for the manipulation. After completing the manipulation check, participants were debriefed and thanked for their participation.

Manipulation of motivation. Participants in one condition received an empathy-relevant threat to a traditionally positive feature of their gender identity. This threat was presented in a passage that challenged the notion that women possess greater empathic ability, endorsed the importance of this empathic ability, and then gave them the opportunity to perform well and restore their gender's

reputed ability. The passage was titled "The superiority of women's intuition: Myth or reality?" Participants received the following information:

Contrary to popular wisdom, recent studies suggest that women are not particularly intuitive because they attain relatively low scores on measures of emotional intelligence. Emotional intelligence (EQ) is a very important ability and can be as powerful, and at times more powerful than academic intelligence. It is emotional intelligence that is the best predictor of life success. People with high levels of emotional intelligence (regardless of their academic intelligence) are very likely to succeed in marriage, work, friendship, etc. Therefore it is important to more rigorously evaluate the claim that women's superior intuition is a myth. To achieve this aim, we have developed a test that will assess your level of emotional intelligence.

Participants in the control condition were instead presented with a passage that disguised the task as being associated with a statistical procedure rather than traditional female gender roles. The passage stated that the objective of the study was "an exploratory factor analysis, with varimax rotations, on the Interpersonal Perception Inventory, to determine to what extent it correlates with a number of similar person perception tests." Participants then read that they would learn about this statistical procedure if they "some-day take a postgraduate statistics course."

Collection of mind-reading inferences. Following a detailed explanation of the next (mind-reading inference) phase, participants watched each 5-min videotaped discussion twice. Although the order of tape presentation was constant (Tape 1: incompatible values; Tape 2: lack of time together), the participants were randomly assigned to infer either the difficult-to-read or the easy-to-read target of Tape 1 first, and then the order of target readability presentation was counterbalanced across stimulus tapes. After reading a brief description of the nature of the discussion topic, the participants were instructed to watch the first discussion. Participants paused the tape at each of the four specified points where the designated target had previously reported having had a thought or feeling and inferred (in writing) the content of those thoughts and feelings. Participants then viewed the first discussion again, but on this occasion they inferred the content of the remaining target's four thoughts and feelings. The same procedure was repeated for the second 5-min discussion (Thomas & Fletcher, 2003).

Manipulation check. After finishing the mind-reading task, participants completed two self-report items that assessed the effectiveness of the motivation manipulation. The items were presented within a "Feedback sheet" that was ostensibly for the benefit of improving further research. The first item asked "How motivated were you to make an accurate judgment?" and the second asked "How hard did you try to accurately judge the specific thoughts or feelings of the targets in the video?" Participants responded to each item using a 7-point scale, from 1 (*not at all*) to 7 (*very much*).

Given that accuracy researchers have typically found that such subjective measures yield only weak evidence for the effectiveness of their motivation manipulations (see Pelham & Neter, 1995), two additional manipulation checks were used to assess motivation more objectively. First, the experimenter timed by stopwatch how

¹ Prior permission was obtained from these dating couples to use their tapes as stimulus material.

long it took each participant to complete the mind-reading task. Second, a rater counted the number of words generated by participants during their mind-reading inferences. In theory, people who are more motivated to be accurate should spend more time completing the task and should write more expansive inferences.

Coding of the Mind-Reading Accuracy and Mediating Variables

Two sets of observer-coded measures were computed from reviewing all of the participants' mind-reading inferences. The first set included the measure of mind-reading accuracy. The second set comprised measures of two theoretically guided mediators: the level of differentiation exhibited during each thought–feeling inference (operationalized by the number of independent hypotheses and the number of distinct emotions recorded) and the complexity level of perceivers' attributions of target's thoughts and feelings.²

Mind-reading accuracy measure. Mind-reading accuracy characterized the extent to which the target's actual thoughts and feelings matched the content of the perceiver's inference. Two trained coders, different from those who coded the measures of cognitive complexity, independently estimated the degree of similarity between the content of perceivers' and targets' statements using a 3-point scale, where 1 was *essentially different content*; 2 was *somewhat similar, but not the same*; and 3 was *essentially the same content* (see Ickes et al., 1990). To enhance coding reliability and validity, raters were provided with a detailed coding guide for applying this criterion to each of the 16 thought–feeling statements. For example, to obtain a maximum score of 3 for the woman's thought that she was unhappy about her comparative lack of money relative to that of her partner, a perceiver would need to mention both her unhappiness about her poor financial situation and his healthier financial situation. A statement that mentioned unhappiness about one but not both of the targets' financial situations, or an inference that she was happy that at least one of them had lots of money, would have received a score of 2. Coders' judgments yielded a high interrater reliability coefficient of .81, and all disagreements were resolved by discussion, in conjunction with the experimenter (who was blind to condition). Participants' final ratings were summed across the eight thought–feeling inferences within each level of target readability (difficult to read, easy to read) and then divided by the number of inferences to provide mean summary scores for each level of readability. In accordance with standard practice (e.g., Marangoni et al., 1995; Thomas et al., 1997), both accuracy scores were then zero-based and converted to percentages for ease of interpretation.

Differentiation. Differentiation refers to the number of evaluatively distinct dimensions of a problem considered by the perceiver (see Tetlock & Kim, 1987). Two separate indices of differentiation were constructed from the perceivers' mind-reading inferences. First, two independent coders rated the number of distinct hypotheses generated per inference by partitioning the written content into basic units that were defined as homogenous in content, regardless of length or syntactic structure. In essence, these hypotheses represented independent thoughts such as “she is questioning the future of their relationship because he spends more time with his mates than her” and “he thinks that she spends too much money on clothes and other girly stuff that he considers to be frivolous.” Second, two coders

independently recorded the number of distinct emotions each perceiver recorded per inference. Coders judgments yielded good agreement: 98% (Cohen's $\kappa = .87$) for the number of hypotheses and 95% (Cohen's $\kappa = .88$) for the number of emotions. All disagreements between coders were discussed and resolved in conjunction with the experimenter (who was blind to condition). The final frequency scores for both hypotheses and emotions were then tallied separately across the eight thought–feeling inferences within each level of target readability (difficult to read, easy to read) and then divided by the number of inferences to provide mean summary scores for each level of target readability. Note that the two indices of differentiation (hypotheses and emotions) were significantly correlated with one another, $r(52) = .24$, $p < .05$, one-tailed. Hence, we standardized both measures and then combined them to form a composite measure of differentiation.³

Attributional complexity. Drawing from both an established attributional complexity scale (Fletcher et al., 1986) and prior schemes for coding integrative complexity (e.g., Schroder, Driver, & Streufert, 1967; Tetlock & Kim, 1987), we developed the following five categories for coding the complexity level of perceivers' mind-reading attributions. The first category reflected the presence of causal attributions, involving the use of explanations for targets' thoughts, feelings, and behaviors, which were typically denoted by the terms *as*, *that*, *because*, or *since* (e.g., “she feels frustrated because he keeps interrupting her”). The second category included the use of clarification and integration using qualifiers, which were typically denoted by the terms *but*, *although*, *if*, *yet*, *rather*, or *instead* (e.g., “she understands that his mother is lonely, but her demands are undermining their relationship”). The third category coded the use of interpretation, which involved linking thoughts, feelings, and behavior into complex causal chains where one or more premises are followed by a conclusion. These chains were typically denoted by the terms *so*, *therefore*, or *means that* (e.g., “he doesn't particularly blame her; he feels it is both their faults, and therefore they both should take responsibility for finding a solution to this problem”). The fourth category included temporal attributions, which were references to how the past has influenced current thoughts, feelings, and behavior (e.g., “she is thinking ‘same old, same old.—Will he ever change?’”). The fifth category coded the recognition and interpretation of ambivalence either between or within thoughts, feelings, and behavior, which typically involved the feigning or concealing of thoughts and feelings (e.g., “his insensitivity bothers her more than she is letting on”). Finally, we coded the use of abstract comparisons to other people or some standard (e.g., “It is not fair or normal for his mum to treat him like a little boy and spoil him. My mother would never treat me like this.”).

Two trained coders, different from those who coded the indices of differentiation, were supplied with a guide to the coding procedure (including a list of the complexity categories and relevant

² A more detailed description of the coding scheme is available from Geoff Thomas.

³ Admittedly, there is some inconsistency in the literature in terms of how to deal with such partially independent data. In this article we adopted a parsimonious approach by aggregating indices into composite scores but only when the indices were significantly correlated at the .05 alpha level and when subsequent analyses (e.g., manipulation checks, mediational analyses) were equivalent using both the summary and index-specific scores.

exemplars from the pilot coding). Raters independently examined the basic units of each thought–feeling inference that had been derived during the differentiation coding and systematically coded for the presence (or absence) of each of the previously described content categories (in hierarchical order). Coders then scored each inference using a 3 point scale, where 1 = *the presence of none or one distinct attributional complexity category*, 2 = *the presence of two distinct categories*, and 3 = *the presence of three or more distinct categories*.⁴ The content of any inferences that involved repetition or were incoherent were excluded from coding. Raters' attributional complexity scores achieved a high level of interrater reliability ($r = .82$). The few disagreements that occurred were resolved by discussion, in conjunction with the experimenter (who was blind to condition). These scores were tallied across the eight thought–feeling inferences within each level of target readability (difficult to read, easy to read) and then divided by the number of inferences to provide a global attributional complexity index for both the difficult-to-read and easy-to-read targets. In line with the mind-reading accuracy measure, both attributional complexity scores were then converted to percentages for ease of interpretation.

We should note that an important assumption of our attributional complexity coding is that the level of attributional content spontaneously embedded in participants' mind-reading judgments is a good proxy for the actual level of complex thinking engaged in by participants during the process of deliberating and reaching their judgments. This assumption seems warranted for a number of reasons. Our measure is consistent with established open-ended (or semiprojective) measures of cognitive complexity (e.g., Schroder et al., 1967) and also avoids the problems associated with demand characteristics (Thomas & Fletcher, 1997). Moreover, there is good evidence for the construct validity of such spontaneously elicited measures because they predict the actual complexity and effectiveness of real-world decisions and behavior (e.g., Suedfeld & Tetlock, 1977; Winter, 2007) and trait-level measures of attributional complexity (Fletcher et al., 1986). On the basis of this evidence, we expected that participants who were more highly motivated would engage in more complex and sophisticated causal processing while deliberating over mind-reading judgments. Such complex attributional information is therefore likely to be more accessible and salient to participants and, in turn, should become more embedded in the content of their final mind-reading judgments.

Finally, a crucial feature of this attributional complexity coding is that it is conceptually independent from accuracy. Part of the selection criteria for the chosen set of target inferences was good variability in complexity levels for both easy-to-read and difficult-to-read targets. Hence, perceivers can be simple or complex in generating both inaccurate and accurate inferences. Indeed, previous research has found that self-reported trait-level attributional complexity is related only modestly to mind-reading accuracy (see Thomas, 2000; Thomas & Fletcher, 2003). In addition, our measures of attributional complexity and differentiation were not significantly correlated, $r(52) = .19$, *ns*.

Results

Motivation Manipulation Checks

Before testing our primary hypotheses, we assessed the effectiveness of the empathy-deficient gender identity manipulation. Our preliminary analyses found that participants' self-reports of

the motivation to make accurate judgments and the amount of effort exerted were moderately correlated ($r = .38$, $p < .05$). Hence, we aggregated the two ratings to form a composite measure of self-reported effort. Similarly, the two objective behavioral measures of motivation (the time taken to complete the mind-reading task and the number of words generated in the process of inferring targets' thoughts and feelings) were highly correlated ($r = .70$, $p < .001$). Therefore, we standardized both variables and then combined them to form a composite behavioral measure of motivation.

As we expected, *t* tests on the composite measure of behavioral motivation revealed that women in the empathy-deficient gender identity condition demonstrated significantly higher levels of objective motivation ($M = .45$) than did those in the control condition ($M = -.41$), $t(50) = 1.72$, $p < .05$, one-tailed. However, no significant effects were found for the identity threat manipulation on the composite measure of self-reported effort, $t(50) = 0.37$, *ns*.

Moderation by Target Readability

We conducted a 2 (motivation: empathy-deficient gender identity vs. control) \times 2 (target readability: easy to read vs. difficult to read) mixed analysis of variance (ANOVA), in which motivation was treated as a between-subjects factor and target readability was treated as a within-subjects factor. Two main effects and the two-way interaction emerged.

As we expected, women in the empathy-deficient gender identity condition attained significantly higher levels of mind-reading accuracy ($M = 41.0$) than did those in the control condition ($M = 34.0$), $F(1, 50) = 5.08$, $p < .03$, and easy-to-read targets were more accurately inferred ($M = 45.0$) than difficult-to-read targets ($M = 30.1$), $F(1, 50) = 42.66$, $p < .001$. Of importance, these main effects were qualified by the predicted interaction between motivation and target readability, $F(1, 50) = 4.01$, $p = .05$. As can be seen in Figure 1, the empathy-deficient gender identity participants were more accurate ($M = 50.7$) than control participants ($M = 39.2$) when inferring the easy-to-read targets, $F(1, 50) = 8.94$, $p < .01$. When inferring difficult-to-read targets, however, there was no significant difference in mind-reading accuracy between the empathy-deficient gender identity ($M = 31.3$) and control ($M = 28.8$) conditions, $F(1, 50) < 1$, *ns*. Thus, gender-role identity threat enhanced accuracy only when reading easy targets.

Before proceeding to the mediational analyses, we initially conducted a series of 2 \times 2 ANOVAs to test the effects of motivation and target readability on our hypothesized mediators, the measures of cognitive complexity (attributional complexity and differentiation). As we expected, women in the empathy-deficient gender identity condition generated significantly higher levels of attributional complexity ($M = 46.5$) than did those in the control condition ($M = 28.1$), $F(1, 50) = 9.51$, $p < .005$. However, neither the main effect of target readability nor the two-way interaction were significant (F s < 1 , p s $> .75$). In addition, there were no main or interaction effects of motivation and target readability on the level of differentiation contained in

⁴ Pilot coding revealed that the use of more than three distinct categories of attributional complexity per inference were very rare, hence we considered it appropriate to restrict the coding to a 3-point scale.

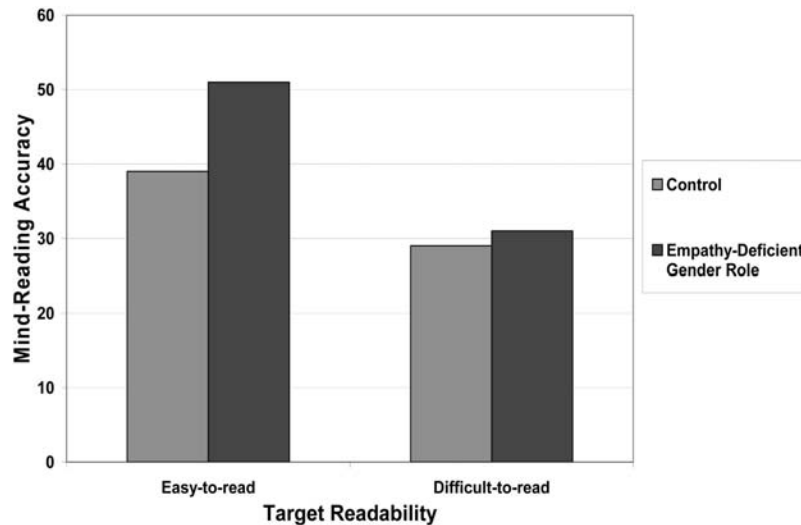


Figure 1. Mean mind-reading accuracy as a function of motivation and target readability (Experiment 1).

perceivers' inferences ($F_s < 1.6$, $p_s > .22$). Hence, attributional complexity is the only form of cognitive complexity that could plausibly mediate the motivated accuracy effect.

Mediation by Attributional Complexity

Using steps outlined by Baron and Kenny (1986), we conducted a regression analyses to test whether the influence of motivation on mind-reading accuracy was mediated by the attributional complexity levels of the perceiver. Given that motivational effects for the difficult-to-read targets were not significant, we tested mediational models for the easy-to-read targets only.

As can be seen in Figure 2, motivation significantly predicted mind-reading performance when the mediating variable was omitted but was reliably reduced when the mediating variable was controlled (Sobel's $z = 2.14$, $p < .03$). In addition, the paths from motivation to attributional complexity and from attributional complexity to mind-reading accuracy were significant. The mediator explained more than half of the variance shared between motivation and mind-reading accuracy. Nonetheless, the path from motivation to mind-reading accuracy remained significant after controlling for attributional complexity. This pattern of partial mediation supports the hypothesis that the complexity of perceivers' mind-reading attributions of the easy-to-read targets mediates the link between motivation and mind-reading accuracy for these targets while leaving open the possibility of additional explanations for the motivated accuracy effect.

Testing Alternative Explanations

One plausible alternative explanation for the motivated accuracy effect pertains to the combined quality and quantity of cognitive processing engaged in by motivated perceivers. It is possible, for example, that higher levels of motivation lead perceivers to generate a set of sophisticated yet competing hypotheses (and emotions) for each inference and therefore enhance their mind-reading performance. In other words, motivated perceivers may have "hedged their bets" in a systematic and educated fashion. Accord-

ingly, we recalculated the model shown in Figure 2 (with attributional complexity as the mediating variable) but controlled for both the number of different hypotheses and emotions utilized. The results depicted in Figure 2 remained essentially unchanged (Sobel's $z = 2.16$, $p < .03$).

A second artifactual explanation of our findings is the possibility that attributionally complex participants generated longer and more verbose mind-reading inferences and hence were more accurate simply as a function of the greater number of words used in their judgments. To ensure that our measure of attributional complexity was an index of quality rather than verbosity, we repeated the analyses depicted in Figure 2 but partialled out the number of words generated

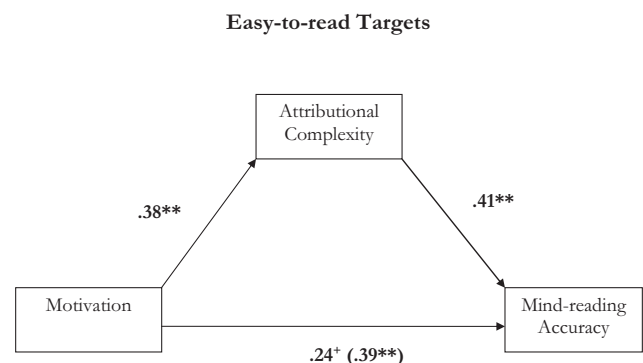


Figure 2. Path analyses depicting the relations among motivation, attributional complexity, and mind-reading accuracy for easy-to-read targets (Experiment 1). For these analyses, the motivation variable was dummy coded with the control condition as 0 and the empathy-deficient gender role condition as 1. The remaining variables were coded as described in the text and then centered around their mean. Reported values are standardized betas. The betas in parentheses are the direct effects of motivation on mind-reading accuracy, whereas the betas not in parentheses are the relations between motivation and mind-reading performance with the mediator controlled. $^+ p < .10$. $^{**} p < .01$.

in the mind-reading inferences. The results were unchanged (Sobel's $z = 2.15, p < .03$).

Finally, it is also possible that the significant paths between motivation, attributional complexity, and mind-reading accuracy for easy-to-read targets (depicted in Figure 2) may be artifactually inflated because unmotivated perceivers resort to trivial nonsubstantive inferences (e.g., "I have no idea"), which in turn leads to low levels of both attributional complexity and accuracy for all such inferences. To assess this possibility, two independent coders rated the extent to which perceivers' generated substantive inferences on a 2-point scale, where 1 = *essentially substantive content* (e.g., *the absence of a reference to "I don't know," "Can't tell," or the equivalent*) and 2 = *essentially nonsubstantive content* (e.g., *the presence of "I don't know" or the equivalent*). The two raters obtained perfect agreement on all inferences coded. The results revealed that there were no cases of nonsubstantive inferences, and therefore this potential artifact could not have explained our results.

Discussion

In Experiment 1, we found that a threat to women's traditional identity as superior mind-readers facilitated their mind-reading performance. Of importance, motivation enhanced performance when reading easy targets only; it had no effect when reading difficult targets. Thus, our results were consistent with our prediction of moderation by target readability. Moreover, tests of several mediational models involving measures of cognitive complexity supported only one explanation for the motivated accuracy effect: Women whose traditional gender-role identity as superior mind-readers was threatened were able to achieve higher levels of accuracy when inferring easy-to-read targets partly because they generated more complex and sophisticated mind-reading attributions.

Although our results provided valuable evidence for the motivational impact of the traditional female gender-role identity as well as the predicted moderation and (partial) mediation of the motivated accuracy effect, our data were confined to female perceivers. Moreover, our checks of the motivation manipulation generated a significant effect for only the more objective measure of motivation. We sought to address these limitations in Experiment 2.

Experiment 2

Experiment 2 was designed to replicate both the moderation by target readability and the mediation by attributional complexity effects but this time by motivating increased mind-reading in a sample of men. Furthermore, we sought to build upon Experiment 1 by providing a more rigorous test of the motivating influence of gender-role identity. This new test included two motivation conditions in addition to our control condition. The first motivation condition was essentially equivalent to the empathy-deficient gender identity condition from Experiment 1. We anticipated that highlighting men's traditional empathy-deficient reputation would not motivate them to attain higher levels of accuracy, because empathy is not central to men's gender identity. Examining the effect of empathy-deficient gender identity in men would also help to directly test the gender-role identity hypothesis proposed by Ickes, Gesn, and Graham (2000) to explain gender differences in mind-reading accuracy. That is, only women should be more motivated to accurately read others' minds

after being told about potential deficits in their empathic ability: This information should not motivate men.

In the second motivation condition, however, we attempted to enhance mind-reading performance by motivating men to adopt a more feminine gender-role identity. On the basis of the gender-role identity hypothesis, we expected that men should be motivated to attain greater accuracy if they could be persuaded to value the empathy-relevant aspects of the traditional feminine gender role. To test this hypothesis, we gave men a message highlighting the way in which being in touch with their feminine side would help them attract and satisfy women, both sexually and emotionally. In doing so, this message should have helped to make empathy a more positive and central feature of men's identity, because empathy was made compatible with maleness by virtue of its capacity to attract women. We then gave male participants the opportunity to demonstrate empathy on a mind-reading task. We predicted that moderation by target readability and mediation by attributional complexity would be evident in the empathy-inclusive gender identity condition but not in the condition that merely reminded men of their empathy-deficient status.

Method

Participants and Design

Participants were 88 male undergraduate students who received £7 (approximately US\$12) for their participation. The experimental design was a 3×2 mixed factorial. Motivation (three conditions: empathy-inclusive gender identity, empathy-deficient gender identity, and control) was manipulated as a between-subjects factor. As in Experiment 1, target readability (two levels: easy to read and difficult to read) was manipulated as a within-subjects factor.

Procedure

Experiment 2 followed virtually the same procedure as in Experiment 1, except for the manipulation of motivation and some additional manipulation check items. The observer coding of mind-reading accuracy ($r = .76$) and attributional complexity ($r = .84$) yielded adequate reliability.

Motivation manipulation. The control condition was identical to the one used in Experiment 1. The empathy-deficient gender identity condition, however, was slightly modified from the one used in Experiment 1 to ensure that it was suitable for male participants. The only differences were that we informed male participants that it was "important to more rigorously evaluate the claim that men's inferior intuition is a reality" and that we removed the reference to "contrary to popular wisdom" when stating that "recent research suggests that men are not particularly intuitive." In essence, we endorsed the traditional view of men's lack of empathic ability, highlighted the importance of empathic ability, and then gave them the chance to perform well and debunk their gender's reputed lack of ability.

Recent studies suggest that men are not particularly intuitive because they attain relatively low scores on measures of emotional intelligence. Emotional intelligence (EQ) is a very important ability and can be as powerful, and at times more powerful than academic intelligence. It is emotional intelligence that is the best predictor of life success. People with high levels of emotional intelligence (regardless

of their academic intelligence) are very likely to succeed in marriage, work, friendship, etc.

Participants then read that it was important to more rigorously evaluate the claim that men's inferior intuition is a reality and were told that they would be given the opportunity to demonstrate their own level of emotional intelligence on the mind-reading task.

In the new empathy-inclusive gender identity condition, the male participants were led to believe that being more nontraditional, empathic, and feminine would help them to better attract and sexually and emotionally satisfy women. Participants were presented with a passage titled "What women want: A man in touch with his feminine side" and the following text:⁵

Contrary to popular wisdom, recent studies have concluded that women's supposed preference for dominant and aggressive alpha males is a myth. In fact, this research has revealed the opposite pattern of findings—that non-traditional men who are more in touch with their feminine side are more likely to attract as well as sexually and emotionally satisfy women than their traditional overly masculine counterparts. From even their first encounters with women, "machos men" are judged to be less interesting and engaging, are three times more likely to be rejected by women when trying to initiate conversations, are judged to be less sexually desirable, and are more likely to be seen in the company of other men than women when leaving bars and clubs at closing time. In contrast, non-traditional men make better first impressions with women. In particular, they are seen as more interesting and easier to talk to, are judged to be more sexually desirable and more sophisticated at flirting, and are more likely to be in the company of women than men when leaving bars and clubs. The traditional male's track record with established relationships is not much better. Partners of traditionally masculine men are significantly more likely to report feeling sad or depressed, feeling worthless, feeling dissatisfied with their sex lives, and their relationships in general.

After reading another paragraph elaborating these points, participants were told that it was important to more rigorously evaluate this communication-rapport hypothesis and that they would be given the opportunity to demonstrate their own level of empathy, sensitivity, and emotional intelligence on a mind-reading test.

Manipulation checks. The manipulation check items were the same as in Experiment 1, except for two additional self-report items that measured empathic identification: "How important is it for men to be in touch with their feminine side?" and "To what extent does empathy help to increase sex appeal?" Participants responded to each item using a 7-point scale, from 1 (*not at all*) to 7 (*very much*).

Results

Motivation Manipulation Checks

As in Experiment 1, the two indices of self-reported effort (motivated accuracy and effort exerted) were significantly correlated ($r = .19$, $p < .05$, one-tailed), and the two objective behavioral measures (time taken and words per inference) were highly correlated ($r = .58$, $p < .05$). Similarly, the two self-report empathic identification items, which were unique to Experiment 2, were moderately correlated ($r = .27$, $p < .05$). Therefore, we created (a) composite self-report measures of effort and empathic identification and (b) a (standardized) composite behavioral measure of motivation.

We began our analyses by submitting the composite manipulation check measures to a series of one-way ANOVAs. Recall that we expected (a) men to be motivated more by the empathy-inclusive gender identity information than by the empathy-deficient gender identity (and control) information and (b) that there would be no difference between the empathy-deficient gender identity and control conditions. The analyses revealed no significant effects across motivation conditions for self-reported levels of empathic identification ($ts < 1.5$, ns). Consistent with our expectations, however, planned comparisons revealed that those in the empathy-inclusive gender identity condition ($M = 5.82$) demonstrated higher levels of self-reported effort than did those in the control condition ($M = 4.93$), $t(58) = 3.10$, $p < .005$, but not relative to those in the empathy-deficient gender identity condition ($M = 5.44$), $t(54) = 1.46$, ns . In addition, there was no difference between the effort levels of the empathy-deficient gender identity and control participants, $t(54) = 1.53$, ns . Similarly, males in the empathy-inclusive gender identity condition ($M = .71$) demonstrated higher levels of behavioral motivation than did those in both the control condition ($M = -.46$), $t(58) = 2.59$, $p < .05$, and the empathy-deficient gender identity condition ($M = -.19$), $t(54) = 1.80$, $p < .05$, one-tailed. Finally, there was no difference between the levels of behavioral motivation in the gender-deficient gender identity and control participants, $t(54) = 0.68$, ns .

To sum up, there is some evidence, especially on the composite objective behavioral measure (time taken and words generated per inference) that we effectively manipulated participants' motivation in the empathy-inclusive gender identity condition as compared to the motivation levels displayed in the other two motivation conditions. Of importance, there were also no differences between the empathy-deficient gender identity condition and control participants on any of the manipulation checks.

Mind-Reading Accuracy

To test the prediction that men's accuracy for easy-to-read targets would be enhanced in the empathy-inclusive gender identity condition, but not in the empathy-deficient gender identity condition, a 3 (motivation: empathy-inclusive gender identity vs. empathy-deficient gender identity vs. control) \times 2 (target readability: easy to read vs. difficult to read) mixed ANOVA was conducted. This analysis revealed a main effect of target readability, $F(1, 85) = 43.83$, $p < .001$, such that easy-to-read targets were more accurately inferred than difficult-to-read targets. In addition, there was a significant main effect of motivation, $F(2, 85) = 5.19$, $p < .01$. Planned comparisons revealed that the mind-reading performance of participants in the empathy-inclusive gender identity condition ($M = 39.7$) was superior to that of participants in both the empathy-deficient gender identity ($M = 32.4$, $p < .02$) and the control conditions ($M = 30.2$, $p < .005$). The mean difference between the empathy-deficient gender identity and control participants was not significant, $F(1, 57) < 1$, ns .

As in Experiment 1, however, these main effects were qualified by the predicted interaction between motivation and target readability, $F(2, 85) = 3.83$, $p < .03$. Figure 3 depicts this interaction.

⁵ The passage was accompanied by a number of fictitious citations to increase credibility.

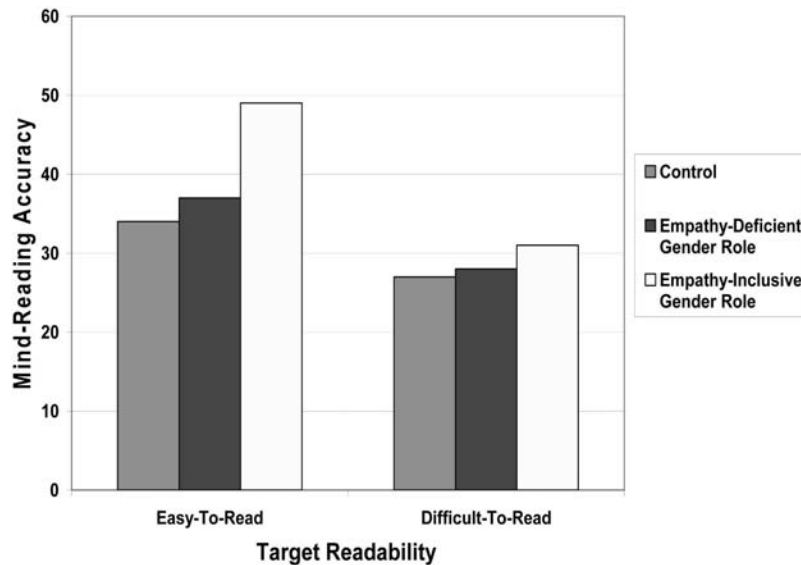


Figure 3. Mean mind-reading accuracy as a function of motivation and target readability (Experiment 2).

When inferring easy-to-read targets, participants in the empathy-inclusive gender identity group attained significantly higher levels of mind-reading accuracy ($M = 48.7$) than did participants in the empathy-deficient gender identity group ($M = 36.8$), $F(1, 55) = 9.98$, $p < .005$, and those in the control group ($M = 33.9$), $F(1, 58) = 16.98$, $p < .001$. As expected, there was no significant difference between the mind-reading performance of the participants in the empathy-deficient gender identity and control conditions, $F(1, 57) > 1$, $p = .45$. When inferring difficult-to-read targets, however, there was no significant difference in mind-reading accuracy between conditions (all F s < 1.14 , p s $> .28$). Thus, male participants read easy (as opposed to difficult) targets more accurately when led to believe that mind-reading would enhance their sex appeal but not when challenged to disprove their male gender-role identity as poor mind-readers.

Before proceeding to the mediational analyses, we initially tested the effects of motivation and target readability on our hypothesized mediator, attributional complexity. As we expected, there was a significant main effect of motivation, $F(2, 85) = 5.39$, $p < .01$. Planned comparisons revealed that attributional complexity in the empathy-inclusive gender identity condition ($M = 48.8$) was higher than in the empathy-deficient gender identity ($M = 35.0$, $p < .05$) and control conditions ($M = 30.5$, $p < .005$). The mean difference between the empathy-deficient gender identity and control participants was not significant, $F(1, 57) < 1$, ns . In contrast, neither the main effect of target readability nor the two-way interaction was significant (F s < 1 , p s $> .47$).

Mediating Role of Attributional Complexity

The next step was to test two mediational models, both of which specified that motivation level can influence the accuracy of reading easy targets through the complexity of perceivers' mind-reading attributions. One set of mediational analyses indexed motivation by contrasting the empathy-inclusive gender identity condition with the control condition, and the other set contrasted

the males in the empathy-inclusive gender identity condition with the empathy-deficient gender identity condition.

As depicted in Figure 4, the empathy-inclusive gender identity condition predicted significantly better mind-reading of easy targets than did the control condition when the mediating variable was omitted, but this effect was reliably reduced when the mediating variable was controlled (Sobel's $z = 2.60$, $p < .001$). In addition, the path from motivation to attributional complexity and the path from attributional complexity to mind-reading accuracy were significant.

Similarly, as illustrated in Figure 5, male participants who were led to believe that mind-reading enhanced their sex appeal generated more complex mind-reading attributions than did those who were challenged to disprove their gender-role reputation as poor mind-readers. The level of attributional complexity, in turn, predicted higher levels of mind-reading accuracy when inferring the easy-to-read targets, after controlling for perceiver motivation. The mediator explained more than half of the variance shared between motivation and mind-reading accuracy (Sobel's $z = 2.00$, $p < .05$).⁶

Discussion

As we anticipated, and in contrast to the pattern of results demonstrated with women in Experiment 1, we found that there was no increase in mind-reading accuracy when we challenged men to disprove their traditional gender-role identity as poor mind-readers. In contrast, the motivated accuracy effect emerged when men were led to believe that being more empathic and in

⁶ In Experiment 2, we did find a few isolated cases of nonsubstantive inferences, such as "I don't know" (3% of all inferences). Hence, we reran the mediational analyses from Experiment 2 while statistically controlling for perceivers' use of nonsubstantive inferences. It is noteworthy that the results remained unchanged.

Easy-to-read Targets

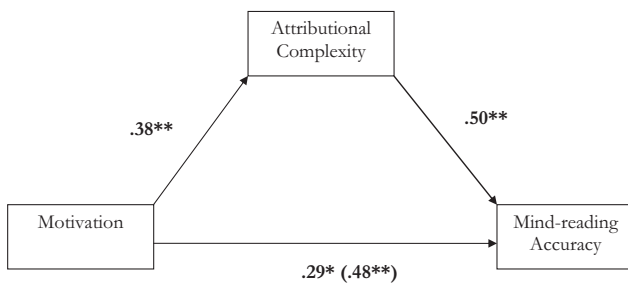


Figure 4. Path analyses depicting the relations among motivation, attributional complexity, and mind-reading accuracy for easy-to-read targets (Experiment 2). For these analyses, the motivation variable was dummy coded with the control condition as 0 and the empathy-inclusive gender role condition as 1. The remaining variables were coded as described in the text. Reported values are standardized betas. The betas in parentheses are the direct effects of motivation on mind-reading accuracy, whereas the betas not in parentheses are the relations between motivation and mind-reading performance with the mediator controlled. $^+ p < .10$. $^{**} p < .01$.

touch with their feminine side would help them to better attract and satisfy women. As in Experiment 1, however, this effect was moderated by target readability. Motivation facilitated accuracy only when reading easy rather than difficult targets. In addition, and consistent with the mediational evidence for the motivated accuracy effect in Experiment 1, attributional complexity partially mediated the effects of the manipulation in our analyses. Specifically, the results of these mediational analyses indicate that men who are led to perceive the value of “feminine” empathy as an aid for increasing their sex appeal are subsequently more accurate than both (a) men who are challenged to debunk their established reputation as inferior mind-readers and (b) control participants. This is at least in part because of their more systematic cognitive processing and complex attributional strategies. Therefore, these results both replicate and extend the results from Experiment 1.

General Discussion

Although often implicated as an important determinant of judgment accuracy, surprisingly little research has directly investigated the role of motivation in generating accurate mind-reading. In the present research, we sought to address this issue by integrating theoretical insights drawn from mind-reading accuracy (Funder, 1995; Ickes & Simpson, 1997, 2001) and from social-cognitive approaches to information processing (e.g., Chaiken et al., 1989; Petty & Cacioppo, 1986; Tetlock & Kim, 1987). Two experiments delineated the conditions under which the motivation to attain higher levels of accuracy could be effectively induced in women and men and demonstrated consistent support for the moderation and mediation of this effect. Given the dearth of research that has directly manipulated motivation, we first discuss the sources of motivated mind-reading accuracy before considering when and how motivation facilitates accuracy.

Manipulating Motivated Accuracy

On the basis of Ickes, Gesn, and Graham's (2000) gender-role identity explanation for gender differences in mind-reading accuracy, we anticipated that women would demonstrate motivated accuracy when their gender-role identity as superior mind-readers was challenged. This effect should occur because empathy is part of women's gender-role identity, and therefore, maintenance of this skill should protect their self-concept. In contrast, we expected that men would not be motivated to mind-read accurately when their gender-role identity as inferior mind-readers was made salient and they were challenged to disprove this inferiority. This lack of motivation was predicted because empathy is not part of male's traditional gender-role identity, and therefore, the maintenance of this skill should not normally help to protect their self-esteem. Thus, although our procedure in the empathy-deficient gender identity condition always emphasized the importance of empathy, the message should resonate only for women because of the part that empathy plays in their self-identity and collective identity.

Consistent with this logic, in Experiment 1 we found that highlighting empathy-deficient gender identity successfully induced higher levels of motivated mind-reading accuracy in women, and in Experiment 2 we found that an identical message had no effect on mind-reading accuracy in men. In contrast, we expected that men would exhibit higher mind-reading accuracy only when they became convinced that the traditional feminine trait of empathy was useful to their masculine identity. That is, when persuaded that empathy and other traditionally feminine traits increased their romantic appeal and mate value to women, men were more motivated to foster their empathy and incorporate it as part of their self-identity. Accordingly, in Experiment 2 we found that men who were induced to be more empathic and in touch with their feminine side revealed the anticipated motivated accuracy effect.

Easy-to-read Targets

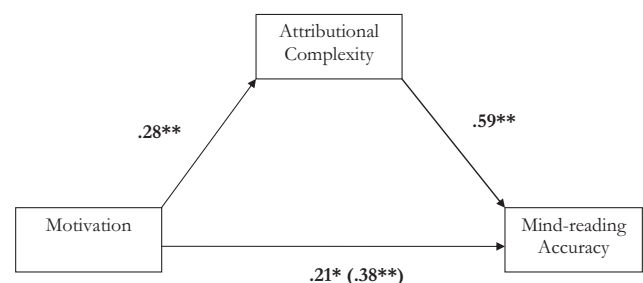


Figure 5. Path analyses depicting the relations among motivation, attributional complexity, and mind-reading accuracy for easy-to-read targets (Experiment 2). For these analyses, the motivation variable was dummy coded with the empathy-deficient gender identity condition (instead of the control condition) as 0 and the empathy-inclusive gender identity condition as 1. The remaining variables were coded as described in the text. Reported values are standardized betas. The betas in parentheses are the direct effects of motivation on mind-reading accuracy, whereas the betas not in parentheses are the relations between motivation and mind-reading performance with the mediator controlled. $^* p < .05$. $^{**} p < .01$.

It should be noted, however, that the checks of our motivation manipulations in both experiments revealed only mixed success, especially for the measures of self-reported effort and empathic identification. On the one hand, this pattern of results is perhaps not surprising given that prior research on the effects of motivation, incentive, and other accuracy manipulations on judgment accuracy and bias have typically yielded weak and nonsignificant effects for self-reported manipulation checks (see Pelham & Neter, 1995, for a review). On the other hand, it seems implausible that our manipulations truly had no effects on participants' levels of motivation given their powerful and theoretically consistent effects on both the complexity of perceivers' attributions and the accuracy of their mind-reading judgments. Also of importance, the results of our behavioral measures of motivation (time taken and words generated per inference) were more compelling. Such objective measures are often viewed as more diagnostic of actual levels of motivation than subjective measures because they avoid the concerns associated with participants' impression management (Pelham & Neter, 1995) and calibrating effort (Petty & Cacioppo, 1986). Therefore, on balance, the evidence supports a motivation-based explanation of our manipulations.

Overall, this pattern provides the first direct support for Ickes, Gesn, et al.'s (2000) gender-role hypothesis, because only women spontaneously exhibited better mind-reading accuracy after being informed about gender-associated deficits in empathic performance. In addition, the results provide an important novel contribution to the accuracy literature by revealing that empathy-related gender identity can constitute an important source of motivated accuracy in both men and women. The key to eliciting greater mind-reading accuracy in men is convincing them that they can enhance their mate value by embracing the traditionally feminine traits of empathy and sensitivity.

When and How Motivation Helps

Across both experiments, we found compelling evidence that motivation improved accuracy when participants were reading easy targets but had no effect when they were reading difficult targets. This finding concurs with the hitherto untested logic of two recent accuracy theories, Funder's (1995) RAM and Ickes and Simpson's (1997, 2001) empathic accuracy model. Both models postulate that the effect of perceiver motivation on accuracy should be constrained by the extent to which targets manifest valid and diagnostic behavioral cues but have received only indirect or preliminary support for this view (e.g., Klein & Hodges, 1999, as cited in Klein & Hodges, 2001).

More important, a critical theoretical contribution of the current research was to elucidate the process by which motivation influences mind-reading accuracy for readable targets. Indeed, past research has typically concentrated on the detection stage of RAM and therefore has remained largely silent as to the specific cognitive processes utilized by perceivers that may facilitate accurate mind-reading. As we predicted, in the current experiments perceivers with higher levels of motivation generated more complex mind-reading attributions, which led to more accurate reading of easy targets. It is important to note that our analyses also ruled out several plausible competing explanations for the motivated accuracy effect. Perceivers who were more motivated did not more accurately read easy targets because they (a) generated a wider

array of independent hypotheses, (b) inferred a greater number of distinct target-related emotions, (c) produced longer and more verbose mind-reading inferences, or (d) generated a higher proportion of nontrivial and substantive inferences. Furthermore, the evidence for the mediation by attributional complexity effect was remarkably consistent across gender and when participants were motivated "to be in touch with their feminine side."

This mediational evidence concurs with a wealth of social cognition theory and research that links motivation to cognitive complexity (e.g., Chaiken et al., 1989; Petty & Cacioppo, 1986) and cognitive complexity to enhanced person perception (e.g., Davis & Kraus, 1997; cf. Pelham & Neter, 1995). It is also consistent with RAM's logic that perceivers who adopt a systematic and effortful quest to detect diagnostic behavioral cues and integrate such cues should derive judgments that are more accurate, as long as the targets generate readable cues in the first place. Note, however, that our results qualify this explanation by delineating between the level of attributional complexity and the differentiation of cognitive processing. Broadly speaking, the motivated accuracy effect is better explained by the quality of perceivers' social cognition than by its quantity. Nevertheless, the fact that attributional complexity acted as a partial mediator indicates that variables other than attributional complexity may also mediate this effect. For example, it is conceivable that motivated perceivers may devote greater attention to tracking the targets' behavior as it changes during the course of the interaction (see Thomas et al., 1997). On the basis of the logic of RAM, greater efforts at the detection stage of the judgment process should increase the likelihood of inferential accuracy.

It is also worth considering why the effect of motivation was benign rather than disruptive when reading difficult targets. There appear to be at least two reasons why motivation may have impeded judgment accuracy for difficult tasks in prior research but not in the current experiments. First, when task difficulty has been operationalized as being an intractable task that is performed under extreme time pressure, motivated perceivers may become increasingly anxious and frustrated, which in turn may undermine accuracy (see Koller & Wicklund, 1988; cf. Pelham & Neter, 1995). Second, when tasks are difficult because they involve a good deal of nondiagnostic and schema-inconsistent information interspersed with diagnostic and schema-consistent information, motivated perceivers may become overly elaborate (Tetlock & Boettger, 1989) or too schema driven (e.g., Gesn & Ickes, 1999). As such, high levels of motivation may lead perceivers to overlook diagnostic cues, follow false leads, and engage in a form of interpretative overkill that distorts and disrupts judgment veridicality (Thomas & Fletcher, 1997).

This second reason is more relevant to the current design, which directly varied the diagnosticity of the information provided by the targets. To examine the degree to which motivated perceivers became more complex in the present research, we conducted a series of paired *t* tests to compare the mean levels of attributional complexity within the high motivation conditions for both easy and difficult targets and across both experiments. No significant differences were obtained (all *ts* < 1), which suggests that motivated perceivers engaged in similar levels of complexity for both easy and difficult targets and thus were not overly elaborate (or overly simplistic) when faced with the relatively tough task of inferring difficult-to-read targets. Moreover, to determine whether

engaging in more complex thinking helped or hindered perceivers when reading difficult targets, we computed the correlations between attributional complexity and accuracy for participants who were reading difficult targets. The results consistently showed that greater complexity was associated with greater mind-reading accuracy (Experiment 1, $r = .30$, $p < .05$; Experiment 2, $r = .58$, $p < .001$). In other words, contrary to previous arguments about the detrimental effects of overthinking when faced with challenging tasks, the positive relations found in our results between attributional complexity and mind-reading accuracy, irrespective of target readability, suggest that systematic in-depth cognitive processing is a good generic strategy for perceivers to adopt.

On the basis of the logic of RAM, we also suspect that attributional complexity may partly explain the established relations between other distal variables (e.g., relationship quality) and mind-reading accuracy, at least in nonthreatening contexts. For example, it is conceivable that highly satisfied couples are motivated to put greater cognitive effort into understanding each other's mental states and, therefore, generate more complex mind-reading attributions, which lead to more accurate mind-reading. Moreover, the inclination to develop more sophisticated mind-reading attributions may also explain the link between highly educated perceivers and superior mind-reading performance (see Thomas et al., 1997). The testing of such mediational models and the quest for additional cognitive strategies represents an important avenue for future research.

Applied and Broader Theoretical Implications

Our results have ramifications for the prospects of improving the accuracy of interpersonal judgments. According to RAM (Funder, 1999), the ultimate goal of accuracy research is to delineate a set of valid cues and judgment strategies that could be didactically taught to judges. However, there are significant obstacles to this research agenda. For example, the features that have been found to increase judgment accuracy are either not judge-based moderators or may not meaningfully generalize across targets. Consistent with this view, researchers have shown that mind-reading performance improves with the provision of target-specific feedback (Marangoni et al., 1995) and with the extent of familiarity between the judge and target (Thomas & Fletcher, 2003). In contrast, our interventions are amenable to didactic instruction through a brief message and not confined to contexts that provide feedback and high familiarity. It is also worth considering the mediation of this effect: Attributional complexity appears to be a successful perceiver-based judgment strategy that generalizes across targets, and there is some evidence that complexity can be induced and enhanced by instructing perceivers to adopt a scientific mind-set (see Fletcher, Rhodes, Rosanowski, & Lange, 1992). Thus, attributional complexity appears to be another promising construct for improving mind-reading performance, one that could potentially inform empathy training.

It is also interesting to consider how this research compares with theory and research on other topics. At first glance, our gender-role motivation approach resembles the growing body of research on the effects of stereotype activation on performance (e.g., Steele, 1997; Steele & Aronson, 1995; Wheeler & Petty, 2001). However, it is important to note that there are a number of critical distinctions between these two approaches. For instance, in

terms of the nature of the respective experimental manipulations, classic stereotype threat (or lift) manipulations involve the explicit confirmation of a negative (or positive) traditional group-relevant stereotype so that members perform worse (or better) in stereotype-consistent ways. These conditions are different from our key gender-role identity manipulations that affected performance because our instructions either made no mention of empathy-related stereotypes or provided evidence that disconfirmed (rather than confirmed) women's positive traditional stereotype as superior mind-readers. In essence, our approach constantly focused on manipulating the desirability of empathy to participants' self-identity and collective identity rather than the activation of stereotypes per se. Moreover, stereotype threat theory is not as well placed to explain the performance improvements consistently found across both our experiments. For example, the available evidence in the stereotype threat literature suggests that stereotype performance boosts are confined to the use of subtly and implicitly activated positive stereotypes; blatant reference to stereotypes (as occurred in Experiment 1) have in fact lead to performance impairment (see Shih, Ambady, Richeson, Fujita, & Gray, 2002; Shih, Pittinsky, & Ambady, 1999). Finally, to date, the work on stereotype threat has struggled to find reliable mediational evidence for its effects (see Wheeler & Petty, 2001, for a review), and in particular there has been a lack of evidence to explain how stereotype activation might explain the cognitive processes underlying performance improvements (e.g., Croizet et al., 2004). A crucial discovery in our research was the consistent theoretically guided role played by attributional complexity in improving mind-reading.

Future research could benefit from considering the limitations and extensions of our findings to more general mind-reading processes and judgment contexts. For example, the constraining effects of target readability on motivated accuracy may not extend to other predictors of mind-reading performance. Thomas and Fletcher (2003) found that the level of acquaintanceship moderates the effects of target difficulty, with more intimate judges relying on their rich preexisting theories of their partner to maintain mind-reading accuracy in the absence of diagnostic cues. In a similar vein, there is some evidence that intelligence (Thomas & Maio, 2008) and self-efficacy (Thomas, 2006) ameliorate the effect of target difficulty.

In terms of the broader interpersonal sensitivity literature, one could argue that the strategic benefits of motivation and elaboration may not extend to other kinds of judgment tasks, such as decoding nonverbal behavior, detecting deception, and judging personality at zero acquaintance situations. A likely reason for this constraint is that the Ickes mind-reading paradigm occurs in the context of complex dyadic interactions where verbal cues are more diagnostic than nonverbal cues (Gesn & Ickes, 1999; Hall & Schmid Mast, 2007). In contrast, many alternative interpersonal sensitivity paradigms (e.g., the Profile of Nonverbal Sensitivity; Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979) are primarily concerned with the judging of affective states from much thinner slices of behavior in which nonverbal cues predominate (see Hall & Schmid Mast, 2007). Indeed, on such tests of nonverbal sensitivity, some researchers have found that high motivation and more deliberative judgment strategies have either not helped (e.g., Ambady, Bernieri, & Richeson, 2000; Horgan & Smith, 2006) or even hurt mind-reading performance (see Ambady & Gray, 2002; Koenig

& Eagly, 2005). Thus, the predictors and judgment strategies associated with good mind-reading are likely to be domain-specific, and in particular vary as a function of the availability and diagnosticity of verbal versus nonverbal cues.

Conclusion

Across two experiments we found evidence for enhanced mind-reading accuracy when both men and women were motivated to manifest a traditional feminine gender-role identity while performing the mind-reading task. These findings provide the first direct support for Ickes, Gesn, and Graham's (2000) gender-role identity explanation for gender differences in mind-reading accuracy, while revealing an important constraint to this effect. Specifically, motivation facilitated accuracy when reading easy targets but not when reading difficult targets. This pattern of results illuminates the interpersonal nature of mind-reading processes by showing the importance of discerning the joint contributions of perceiver and target characteristics (Marangoni et al., 1995; Thomas & Fletcher, 2003).

More important, these two experiments addressed the key causal mechanism through which motivation enhanced accuracy by showing that the complexity of perceivers' mind-reading attributions partially mediated the effect. These findings shed new light on the underlying cognitive processes and strategies utilized by the motivated mind-reader. Of course, the judgmental consequences of enhanced motivation and introspection are not universally beneficial (Kruglanski, 1989) and may even in some contexts act like a double-edged sword (e.g., Ambady & Gray, 2002; Pelham & Neter, 1995; Simpson et al., 1995; Wilson & Schooler, 1991). If carefully harnessed, however, effortful and sophisticated deliberation may be an important ingredient for the facilitation of better communication and social cohesion, for both men and women.

References

- Ambady, N., Bernieri, F. J., & Richeson, J. A. (2000). Toward a histology of social behavior: Judgmental accuracy from thin slices of the behavioral stream. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 32; pp. 201–272). San Diego, CA: Academic Press.
- Ambady, N., & Gray, H. M. (2002). On being sad and mistaken: Mood effects on the accuracy of thin-slice judgments. *Journal of Personality and Social Psychology*, 83, 947–961.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
- Chaiken, S., Giner-Sorolla, R., & Chen, S. (1996). Beyond accuracy: Defense and impression motives in heuristic and systematic processing. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking motivation and cognition to behavior* (pp. 553–578). New York: Guilford Press.
- Chaiken, S., Liberman, A., & Eagly, A. H. (1989). Heuristic and systematic information processing within and beyond the persuasion context. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 212–252). New York: Guilford Press.
- Croizet, J.-C., Després, G., Gauzins, M.-E., Hugué, P., Leyens, J.-P., & Méot, A. (2004). Stereotype threat undermines intellectual performance by triggering a disruptive mental load. *Personality and Social Psychology Bulletin*, 30, 721–732.
- Cross, S. E., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin*, 122, 5–37.
- Davis, M. H., & Kraus, L. A. (1997). Personality and empathic accuracy. In W. Ickes (Ed.), *Empathic accuracy* (pp. 144–168). New York: Guilford Press.
- Eisenberg, N., & Lennon, R. (1983). Sex differences in empathy and related capacities. *Psychological Bulletin*, 94, 100–131.
- Fazio, R. H. (1990). Multiple processes by which attitudes guide behavior: The MODE model as an integrative framework. *Advances in Experimental Social Psychology*, 23, 75–109.
- Fletcher, G. J. O., Danilovics, P., Fernandez, G., Peterson, D., & Reeder, G. D. (1986). Attributional complexity: An individual differences measure. *Journal of Personality and Social Psychology*, 51, 875–884.
- Fletcher, G. J. O., Reeder, G. D., & Bull, V. I. (1990). Bias and accuracy in trait attribution: The role of attributional complexity. *Journal of Experimental Social Psychology*, 26, 275–288.
- Fletcher, G. J. O., Rhodes, G., Rosanowski, J., & Lange, C. (1992). Accuracy and speed of causal processing: Experts versus novices in social judgment. *Journal of Experimental Social Psychology*, 28, 320–338.
- Fletcher, G. J. O., & Thomas, G. (1996). Close relationship lay theories: Their structure and function. In G. J. O. Fletcher & J. Fitness (Eds.), *Knowledge structures in close relationships: A social psychological approach* (pp. 3–24). Hillsdale, NJ: Erlbaum.
- Funder, D. C. (1995). On the accuracy of personality judgment: A realistic approach. *Psychological Review*, 102, 652–670.
- Funder, D. C. (1999). *Personality judgment: A realistic approach to person perception*. New York: Academic Press.
- Gagné, F. M., & Lydon, J. E. (2004). Bias and accuracy in close relationships: An integrative review. *Personality and Social Psychology Review*, 8, 322–338.
- Gagné, R. M., & Fleishman, E. A. (1959). *Psychology and human performance*. New York: Holt.
- Gesn, P. R., & Ickes, W. (1999). The development of meaning contexts for empathic accuracy: Channel and sequence effects. *Journal of Personality and Social Psychology*, 77, 746–761.
- Graham, T., & Ickes, W. (1997). When women's intuition isn't greater than men's. In W. Ickes (Ed.), *Empathic accuracy* (pp. 117–143). New York: Guilford Press.
- Hall, J. A., & Schmid Mast, M. (2007). Sources of accuracy in the empathic accuracy paradigm. *Emotion*, 7, 438–446.
- Horgan, T. G., & Smith, J. L. (2006). Interpersonal reasons for interpersonal perceptions: Gender-incongruent purpose goals and nonverbal judgment accuracy. *Journal of Nonverbal Behavior*, 30, 127–140.
- Ickes, W., Buysse, A., Pham, H., Rivers, K., Erikson, J. R., & Hancock, M. (2000). On the difficulty of distinguishing "good" and "poor" perceivers: A social relations analysis of empathic accuracy data. *Personal Relationships*, 7, 219–234.
- Ickes, W., Gesn, P. R., & Graham, T. (2000). Gender differences in empathic accuracy: Differential ability or motivation? *Personal Relationships*, 7, 95–109.
- Ickes, W., & Simpson, J. A. (1997). Managing empathic accuracy in close relationships. In W. Ickes (Ed.), *Empathic accuracy* (pp. 218–250). New York: Guilford Press.
- Ickes, W., & Simpson, J. A. (2001). Motivational aspects of empathic accuracy. In G. J. O. Fletcher & M. S. Clark (Eds.), *Blackwell handbook of social psychology: Interpersonal processes* (pp. 229–249). Malden, MA: Blackwell.
- Ickes, W., Stinson, L., Bissonnette, V., & Garcia, S. (1990). Naturalistic social cognition: Empathic accuracy in mixed-sex dyads. *Journal of Personality and Social Psychology*, 59, 730–742.
- Klein, K. J., & Hodges, S. D. (2001). Gender differences, motivation, and empathic accuracy: When it pays to understand. *Personality and Social Psychology Bulletin*, 27, 720–730.
- Koenig, A. M., & Eagly, A. H. (2005). Stereotype threat in men on a test of social sensitivity. *Sex Roles*, 52, 489–496.

- Koller, M., & Wicklund, K. A. (1988). Press and task difficulty as determinants of preoccupation with person descriptors. *Journal of Experimental Social Psychology*, 24, 256–274.
- Kruglanski, A. W. (1989). *Lay epistemics and human knowledge: Cognitive and motivational bases*. New York: Plenum.
- Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, 108, 480–498.
- Marangoni, C., Garcia, S., Ickes, W., & Teng, G. (1995). Empathic accuracy in a clinically relevant setting. *Journal of Personality and Social Psychology*, 68, 854–869.
- Pelham, B. W., & Neter, E. (1995). The effect of motivation of judgment depends on the difficulty of the judgment. *Journal of Personality and Social Psychology*, 68, 581–594.
- Petty, R. E., & Cacioppo, J. T. (1986). The elaboration-likelihood model of persuasion. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 19, pp. 123–205). New York: Academic Press.
- Quattrone, G. A. (1982). Behavioral consequences of attributional bias. *Social Cognition*, 1, 358–378.
- Rosenthal, R., Hall, J. A., DiMatteo, M. R., Rogers, P. L., & Archer, D. (1979). *Sensitivity to nonverbal communication: The PONS test*. Baltimore: The Johns Hopkins University Press.
- Schroder, H. M., Driver, M. J., & Streufert, S. (1967). *Human information processing: Individuals and group functioning in complex social situations*. New York: Holt, Rinehart and Winston.
- Shih, M., Ambady, N., Richeson, J. A., Fujita, K., & Gray, H. M. (2002). Stereotype performance boosts: The impact of self-relevance and the manner of stereotype activation. *Journal of Personality and Social Psychology*, 83, 638–647.
- Shih, M., Pittinsky, T. L., & Ambady, N. (1999). Stereotype susceptibility: Identity salience and shifts in quantitative performance. *Psychological Science*, 10, 80–83.
- Simpson, J. A., Ickes, W., & Blackstone, T. (1995). When the head protects the heart: Empathic accuracy in dating relationships. *Journal of Personality and Social Psychology*, 69, 629–641.
- Simpson, J. A., Ickes, W., & Grich, J. (1999). When accuracy hurts: Reactions of anxious-ambivalent dating partners to a relationship-threatening situation. *Journal of Personality and Social Psychology*, 76, 754–769.
- Sorrentino, R. M., & Higgins, E. T. (1986). Motivation and cognition: Warming up to synergism. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (pp. 3–19). New York: Guilford Press.
- Steele, C. M. (1997). A threat in the air: How stereotypes shape the intellectual identities and performance. *American Psychologist*, 52, 613–629.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69, 797–811.
- Suedfeld, P., & Tetlock, P. E. (1977). Integrative complexity of communications in international crises. *Journal of Conflict Resolution*, 21, 169–184.
- Tetlock, P. E. (1985). Accountability: A social check on the fundamental attribution error. *Social Psychology Quarterly*, 48, 227–236.
- Tetlock, P. E., & Boettger, R. (1989). Accountability: A social magnifier of the dilution effect. *Journal of Personality and Social Psychology*, 57, 388–398.
- Tetlock, P. E., & Kim, J. I. (1987). Accountability and judgment processes in a personality prediction task. *Journal of Personality and Social Psychology*, 52, 700–709.
- Thomas, G. (2000). *Accuracy in empathic and trait judgments: The quest for the good judge, good target, good trait, and good relationship*. Unpublished doctoral dissertation, University of Canterbury, New Zealand.
- Thomas, G. (2006). *Dispositional perceiver motivation and mind-reading accuracy*. Unpublished manuscript, School of Psychology, Cardiff University, United Kingdom.
- Thomas, G., & Fletcher, G. J. O. (1997). Empathic accuracy in close relationships. In W. Ickes (Ed.), *Empathic accuracy* (pp. 194–218). New York: Guilford Press.
- Thomas, G., & Fletcher, G. J. O. (2003). Mind-reading accuracy in intimate relationships: Assessing the roles of the relationship, the target, and the judge. *Journal of Personality and Social Psychology*, 85, 1079–1094.
- Thomas, G., Fletcher, G. J. O., & Lange, C. (1997). On-line empathic accuracy in marital interaction. *Journal of Personality and Social Psychology*, 72, 839–850.
- Thomas, G., & Maio, G. M. (2008). *Profiling the good-minder: The effects of perceiver intelligence and motivation on mind-reading accuracy*. Manuscript submitted for publication.
- Thompson, E. P., Kruglanski, A. W., & Spiegel, S. (2000). Attitudes as knowledge structures and persuasion as a specific case of subjective knowledge acquisition. In G. R. Maio & J. M. Olson (Eds.), *Why we evaluate: Functions of attitudes* (pp. 59–95). Mahwah, NJ: Erlbaum.
- Vroom, V. H. (1964). *Work and motivation*. New York: Wiley.
- Wheeler, S. C., & Petty, R. E. (2001). The effects of stereotype activation on behavior: A review of possible mechanisms. *Psychological Bulletin*, 127, 797–826.
- Wilson, T. D., & Schooler, J. W. (1991). Thinking too much: Introspection can reduce the quality of preferences and decisions. *Journal of Personality and Social Psychology*, 60, 181–192.
- Winter, D. G. (2007). The role of motivation, responsibility, and integrative complexity in crisis escalation: Comparative studies of war and peace crises. *Journal of Personality and Social Psychology*, 92, 920–937.

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