

# Going Along Versus Going Alone: When Fundamental Motives Facilitate Strategic (Non)Conformity

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Three experiments examined how 2 fundamental social motives—self-protection and mate attraction— influenced conformity. A self-protective goal increased conformity for both men and women. In contrast, the effects of a romantic goal depended on sex, causing women to conform more to others' preferences while engendering nonconformity in men. Men motivated to attract a mate were particularly likely to nonconform when (a) nonconformity made them unique (but not merely a member of a small minority) and when (b) the topic was subjective versus objective, meaning that nonconformists could not be revealed to be incorrect. These findings fit with a functional evolutionary model of motivation and behavior, and they indicate that fundamental motives such as self-protection and mate attraction can stimulate specific forms of conformity or nonconformity for strategic self-presentation.

*Keywords:* nonconformity, mating goals, fear, self-presentation, social influence

Whenever you find yourself on the side of the majority, it is time to pause and reflect.

—Mark Twain

Imagine that Solomon, a young professor, and three of his male colleagues meet for dinner at a new restaurant. Inspecting the slate of delectable dishes on the menu, the young professor soon finds himself in a dilemma: What should he order? His new colleagues, however, are unanimous in their selections: Eerily reminiscent of a scene from a classic social psychological study, one by one, each man confidently orders the same item. Considering the choices of the group, how do you think Solomon will order?

Over half a century of research on conformity informs us that people are heavily influenced by the actions and beliefs of others (Asch, 1956; Cialdini, Reno, & Kallgren, 1990; Moscovici, 1985; Sherif, 1936). Given that the young professor is likely motivated to gain the approval of his colleagues (Baumeister & Leary, 1995) and to make a good decision (White, 1959), conformity would help him realize each of these general goals (Cialdini & Trost, 1998; Deutsch & Gerard, 1955; Goldstein & Cialdini, in press). In fact, the restaurant predicament is teeming with factors that make conformity especially probable: The decision is public (Argyle, 1957; Campbell & Fairey, 1989); the professor finds the group desirable (Dittes & Kelley, 1956); the group is composed of no fewer than three individuals (Asch, 1956; Milgram, Bickman, & Berkowitz, 1969); the group's opinion is unanimous (Asch, 1956);

the other group members are similar to the professor (Festinger, 1954; Goldstein, Cialdini, & Griskevicius, 2006; Hornstein, Fisch, & Holmes, 1968); and he is uncertain about his decision (Tesser, Campbell, & Mickler, 1983).

However, what if, in the process of ordering, the young professor's attention is suddenly drawn to the beautiful waitress awaiting his selection? Despite the presence of numerous factors known to spur conformity, going along with his rivals in front of a potential mate is unlikely to draw her attention or impress her (Buss, 2003; Gangestad & Simpson, 2000). In fact, the goal of attracting a romantic partner may be more effectively served through deliberate nonconformity, which can make a man stand out as independent and assertive (Baumeister & Sommer, 1997; Simpson, Gangestad, Christensen, & Leck, 1999). Now consider what would happen if the group was composed of young women who were being served by an attractive male waiter. Would a woman dining with her female colleagues also nonconform when she is motivated to attract a potential romantic partner?

Sizable literatures indicate that people harbor predilections both to stand out and to fit in (e.g., Brewer, 1991; Maslach, Stapp, & Santee, 1985; Snyder & Fromkin, 1980). Given these often-competing tendencies, the present research examines how certain powerful human motives can influence people's tendency to stand out through nonconformity or to fit in through conformity. More specifically, in three experiments, we investigate how conformity and nonconformity may be influenced by two fundamental social motives: the goal to attract a mate and the goal to protect oneself from danger (Kenrick, Li, & Butner, 2003; Maner et al., 2005). In addition to examining potential sex differences, the studies also aim to elucidate the psychological processes by which fundamental motives can elicit differential tendencies to conform.

## Conformity and Motivation

Conformity is behavioral change designed to match or imitate the beliefs, expectations, or behaviors of real or imagined others (Cialdini & Trost, 1998). Decades of research have shown that conformity is highly prevalent (see Cialdini & Goldstein, 2004)

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and that the tendency to imitate is sometimes so swift and mindless that it is almost automatic (Bremner, 2002; Chartrand & Bargh, 1999; Gopnik, Meltzoff, & Kuhl, 1999). One reason why conformity is so ubiquitous is that it is often adaptive: Following others often leads to better and more accurate decisions, especially when we face uncertainty (Cialdini, 2001; Crutchfield, 1955; Mackie, 1987). This kind of accuracy-based conformity is known as *informational influence* (Deutsch & Gerard, 1955), and it persists because in many cases it is the most efficient form of behaving (Gigerenzer & Todd, 1999). Consistent with the underlying accuracy function of informational influence, when people have an elevated motivation to be accurate and find themselves in relatively ambiguous situations, conformity becomes increasingly likely (Baron, Vandello, & Brunson, 1996; Levine, Higgins, & Choi, 2000).

A second underlying reason why people tend to conform is that going along with or mimicking another person tends to produce liking (Chartrand & Bargh, 1999; Hatfield, Cacioppo, & Rapson, 1993). This kind of approval-based conformity is known as *normative influence* (Deutsch & Gerard, 1955), and it serves to facilitate the goal of affiliation (Baumeister & Leary, 1995; Insko, Drenan, Solomon, Smith, & Wade, 1983; Martin & Hewstone, 2003). Normative influence is especially potent because people who deviate from the group are more likely to be punished, ridiculed, and even rejected by other group members (Janes & Olson, 2000; Kruglanski & Webster, 1991; Levine, 1989; Miller & Anderson, 1979; Schachter, 1951). For example, in the classic Asch (1956) line studies, participants tended to conform with the group not necessarily because they believed the consensus of the group reflected the correct response but often because it was easier to go with the crowd than to face the consequences of going against it (Crutchfield, 1955). Correspondingly, when people have a heightened desire to affiliate with a group, mimicry tends to increase (e.g., Lakin & Chartrand, 2003).

Although conformity can confer numerous benefits on an individual, nonconformity can also be advantageous (e.g., Argyle, 1957; Hollander, 1958). Nonconformity includes two types of behavior: (a) *independence*, or resisting influence; and (b) *anti-conformity*, or rebelling against influence (Nail, MacDonald, & Levy, 2000; Willis, 1963). Both types of nonconformity tend to be effective in differentiating people from others, which can satisfy a need for individuation or uniqueness (Maslach et al., 1985; Snyder & Fromkin, 1980). For example, when a person's uniqueness is threatened by an encounter with a highly similar individual, such a situation increases the tendency to nonconform (Duval, 1972; Weir, 1971, as cited in Snyder & Fromkin, 1980). Given that both conformity and nonconformity can be beneficial, this duality raises an important question: What contexts will lead to the emergence of conformity, and what situations will facilitate nonconformity? The answer may depend on the person's currently active goal.

### Fundamental Social Motives

Our perceptions, cognitions, and behavior are profoundly influenced—both consciously and nonconsciously—by a large variety of goals and need states (e.g., Bargh, 1990; Chartrand & Bargh, 2002; Simpson et al., 1999). From an evolutionary perspective, the goals and motives having the most immediate impact on behavior are likely to be those that, over the course of human evolutionary history, have been most closely linked to adaptive outcomes in

social groups, such as attracting and retaining mates, protecting oneself from danger, and attaining and maintaining status (Bugental, 2000; Kenrick, Li, & Butner, 2003).

Empirical investigations based on this perspective have addressed various questions in psychology and have found evidence consistent with this framework (e.g., Cosmides & Tooby, 1992; Gangestad & Simpson, 2000; Haselton & Buss, 2000; Maner et al., 2005; Todd & Gigerenzer, 2000). Although there are good theoretical reasons to believe that an evolutionary perspective could enrich the understanding of social influence processes, there is thus far almost no empirical work that has done so (Sundie, Cialdini, Griskevicius, & Kenrick, in press). The present research was aimed to bridge social influence research and evolutionary psychological models by examining how two fundamental social motives—protecting oneself from harm and seeking a romantic partner—influence people's tendency to conform. Self-protection and mating goals are central to survival and reproduction, and as we discuss below, each goal may lead to different patterns of responding to social influence attempts.

### Self-Protective Motivation and Conformity

We are here today because our ancestors were successful at navigating through the dangers posed by everyday life, making decisions that served their self-protective interests. A long history of research suggests that stimuli indicating the presence of danger acutely activate a self-protective goal and an associated pattern of affect (Plutchik, 1980); this goal then efficiently facilitates perceptions, cognitions, and behaviors associated with greater survival success in ancestral environments (Maner et al., 2005; & Öhman & Mineka, 2001; Schaller, 2003; Schaller et al., 2004). Many self-protective behaviors involve group-cohesive processes (Taylor et al., 2000). To increase the probability of survival, many species of animals, for instance, often strategically mimic others (Wickler, 1968), and individuals tend to herd together to be less conspicuous when threatened by a predator (Hamilton, 1971). Mimicry and imitation have been posited to serve a similar safety-enhancing function in humans (Dijksterhuis, Bargh, & Miedema, 2000), suggesting that a motive to protect oneself from danger may facilitate actions designed to avoid standing out of a crowd.

Dangerous situations also induce stress and anxiety, which tend to increase the need to affiliate in both human and nonhuman animals (e.g., Schachter, 1959; Taylor et al., 2000). The need to affiliate in times of danger is consistent with findings from terror management theory, which show that people's desire to affiliate tends to increase after they consider the frightening thought of their own death (Pyszczynski, Greenberg, & Solomon, 1997; Wisman & Koole, 2003). In summary, research in several areas suggests that when a self-protective motive is active, people should be more likely to go along with the group either to affiliate or to avoid drawing attention to themselves.

### Mate-Attraction Motivation and Conformity

Survival is necessary, but not sufficient, for evolutionary success. Besides surviving, our ancestors were also all successful at reproduction. Not surprisingly, people's cognitions and behaviors are strongly affected by motivational states specifically linked to reproduction. Stimuli indicating the potential for reproductive success tend to activate a mating goal and its associated affective

responses (Scott, 1980); this goal in turn facilitates perceptions, cognitions, and behaviors associated with greater mating success in ancestral environments (Griskevicius, Cialdini, & Kenrick, 2006; Maner et al., 2005; Roney, 2003; Wilson & Daly, 2004). One key to successfully attracting a mate is taking opportunities to positively differentiate oneself from one's rivals (Buss, 2003); and nonconforming can be an effective method to attract attention and to show a distinction between a person and the larger group (Ridgeway, 1978; Schachter, 1951). Thus, it is possible that a mating motive could lead people to go against the group in order to stand out.

Because men and women tend to prefer slightly different characteristics in a romantic partner, men and women seeking to attract a mate may also differ in exactly how and to what extent they will attempt to stand out from their rivals (Barkow, 1989). Traits that women prefer in a mate include willingness to take risks, decisiveness, assertiveness, independence, and general characteristics of leadership (Buss, 2003; Sadalla, Kenrick, & Vershure, 1987). Notably, these are all characteristics that can be conveyed by nonconforming with a group of potential rivals (e.g., by disagreeing with the group). In contrast, traits that men prefer in a mate focus less on social dominance and more on agreeableness and the mate's ability to facilitate group cohesion (Campbell, 2002). Not only may the successful display of these traits be undermined by going against the group, but conforming more to the group may actually lead a woman to appear more agreeable while facilitating group cohesiveness.

Consistent with these differentially preferred characteristics in men and women, research indicates that women are more concerned than men about the quality of interpersonal relationships, group cohesiveness, and the development of shared norms in a group (Eagly, 1978; Eder & Sandford, 1986). Correspondingly, not only do men have a higher drive to display independence and distinctiveness in a group (Baumeister & Sommer, 1997; Cross & Madson, 1997), but women are much quicker to shun female group mates who act against group norms (Goodwin, 1990). Thus, given differing mate preferences for men and women, it is likely that a motive to attract a mate should produce nonconformity for men, but a mate-attraction motive should actually produce more conformity for women.

### Positive and Negative Group Judgments

When one faces the choice of publicly going along with or going against the preferences of the group, this decision is likely to depend on the nature of the group's preference. Consider, for example, a situation in which a person is visually inspecting an unusual painting at a museum with a group of acquaintances. Before the person decides to conform or nonconform from the group's opinion of the painting, it may be important for him or her to consider first whether the others' consensus is that they like or dislike the painting—that is, whether the group judgment is positive or negative. For the individual in the museum, stating that he likes a unique painting is likely to convey positive dispositional information (i.e., "I am generally positive about novel things like paintings"); whereas stating that he dislikes the painting may convey a negative disposition (i.e., "I am generally negative about novel things like paintings").

Given that a mating motive is likely to make people sensitive to self-presentation (Leary, 1995; Schlenker, 2003), and given that

both sexes value some degree of agreeableness in a mate (Green & Kenrick, 1994), mating motives are likely to lead both men and women to present themselves as positive and likable individuals. However, the ability to convey positive dispositional information through conformity or nonconformity hinges on whether the judgment of the group is positive or negative. Consider again the museum situation from a man's perspective. If the group decries the painting as plebeian and amateur (a negative judgment), the man can convey a positive disposition by going against the group. However, if the group praises the painting's penetrating genius (a positive judgment), going against the group does not convey a positive disposition. Thus, although a mate-attraction motive should produce male nonconformity when the group judgment is negative (thereby allowing a man to convey both independence and positive dispositional information by going against the group), the effects of the mating motive should be muted for men when the group judgment is positive (resulting in a conflict between wanting to appear independent and to appear positive).

Whether the group judgment is positive or negative should also influence when mating motives should lead women to conform more. When the group judgment is positive, a woman can convey a positive disposition by going along with the group. However, when the group judgment is negative, going along with the group does not convey positive information. Thus, although a mate-attraction motive should lead women to conform more when the group judgment is positive (thereby allowing a woman to convey positive dispositional information by going along with the group), the effects of the mating motive for women should be muted when the group judgment is negative.

### Study 1

The initial study examined how two fundamental social goals—a motive for self-protection and a motive to attract a mate—influence men and women's tendency to conform in a same-sex group (as compared with people primed with neutral motives). Self-protection and mate-attraction motives were primed through short imagination scenarios. Afterward, conformity was measured by the degree to which the positive versus negative judgment of the group influenced participants' ratings of a painting (see Mucchi-Faina, Maass, & Volpato, 1991).

We hypothesized that, when a self-protective mindset was primed, men and women's conformity would increase. Moreover, this increase in conformity was predicted to persist regardless of whether the group judgment was positive or negative. Regarding mate-attraction motives, different predictions were made for men and women. For men, we predicted that a mating mindset would produce nonconformity primarily when the group judgment is negative, which would enable men who go against the group to appear independent and convey a positive disposition. For women, we predicted that a mating motive should produce more conformity primarily when the group judgment is positive, which would allow women who go along with the group to appear more agreeable and convey a positive disposition.

### Method

#### Participants

Two hundred thirty-seven participants (113 male, 124 female) were recruited from introductory psychology classes as partial fulfillment of

their class requirement. All participants came to the lab in same-sex groups of 3–6 and were seated at private computers that were visually shielded from others by partitions. The mean age for women was 19.2 ( $SD = 1.6$ ), and the mean age for men was 19.8 ( $SD = 1.9$ ).

### Design and Procedure

The study design was a between-participants  $2$  (participant sex)  $\times$   $4$  (motive prime: mate attraction, self-protection, “scenario” control, or “no-prime” control)  $\times$   $2$  (group judgment: positive vs. negative) design. In the first part of the study, participants rated the attractiveness of multiple images that they believed were used to establish their aesthetic preferences. After the ratings, they underwent one of the four priming manipulations. After the prime, participants entered a computer chat room with 3 same-sex individuals with whom they believed they would later have a face-to-face discussion on aesthetic preferences. In the chat room, they publicly rated one of the images that they had previously rated on how interesting or uninteresting they believed it to be. Half of the time the ratings of the other 3 group members were programmed to be positive, and half of the time the group judgment was negative. The chat room was arranged so that the participant was always the last person in the group to provide a public rating.

**Conformity measure.** The purpose of the first part of the study was to ascertain the participants’ actual private preferences for a specific artistic image that would later serve as the key image of interest in the chat room (with the initial private rating of the image serving as a covariate for the chat-room rating of the image). To reduce pressures to be consistent between the private and the public ratings, and to decrease possible suspiciousness, participants also rated 39 distracter images on the extent to which they thought each image was interesting. The images were collected from the Internet and consisted of various complex and simple graphic artistic designs and abstract paintings. Ratings were provided on a 9-point scale ranging from 1 (*not at all interesting*) to 9 (*very interesting*). Participants were led to believe that the 40 images were part of a much larger set and that other participants were likely rating a different set of images. Their ratings for the 40 images indicated a wide range of preferences. However, the mean rating for the key image was 5.00 ( $SD = 1.71$ ), which was at the midpoint of the scale.

After the private ratings, participants were informed that there was another group of participants in a different room that was also currently working on the same study. They were then told that they had been randomly assigned to a group of four same-sex participants from the two rooms, and the group was linked together by computer in a virtual chat room. Participants were told that in the second half of the study, all 4 members of their group would meet face to face to discuss their individual aesthetic preferences. The chat room was ostensibly the first step in the group discussion and served to publicly ascertain everyone’s aesthetic preferences, which would be the focus of the later discussion. This part of the procedure was designed to ensure that participants were accountable for their responses in the chat room because they might later need to justify their responses in the face-to-face discussion.

In the chat room, participants again rated their preferences for the key image. They were led to believe that the image was randomly chosen by the computer and that it might not have been previously seen by them or their 3 group mates. However, it was arranged so that, as participants rated the image, they could see on the screen the ratings of their group members, who were programmed to provide their ratings before the participants. Half of the time, the group judgment was positive (8, 8, 7), indicating that they thought the image was highly interesting; the other half of the time, group judgment was negative (2, 2, 3), indicating that they thought the image was very uninteresting. The rating of the image constituted the dependent measure of the study. Given that participants had no prior interaction with their group mates, their public rating of the image in the chat room was the first piece of information they conveyed about themselves to the group.

**Priming procedure.** Just before participants entered the chat room, they underwent a focusing task that served as the motive prime manipu-

lation. In the task, they read one of three short scenarios that were designed to activate a self-protection, a mate-attraction, or a neutral motive. Each of the three scenarios was of similar length (about 850 words) and contained the same instructions: “Please carefully read the following scenario. As you read, try to imagine yourself in the scenario and create a vivid mental picture.”

In the self-protective scenario, participants imagined being in a house alone late at night. As the scenario progressed, they overheard scary noises outside and believed that someone had entered the house. After calling out and receiving no reply, the story ended as someone was about to enter the bedroom. In the mate-attraction scenario, participants imagined being on vacation with their friends. While on vacation, the reader met a highly desirable person of the opposite sex and spent a romantic day with the new romantic interest. The scenario ended as the two people were passionately kissing on a moonlit beach and feeling a strong desire to be with each other.<sup>1</sup>

The study had two separate control conditions: a scenario control and a no-prime control. In the scenario control, participants read a scenario similar in length to the other two scenarios, except that it was devoid of threat- or romance-inducing content. In the control scenario, participants imagined getting ready to go to a much-anticipated concert with a same-sex friend. They imagined that, during the night of the show, they could not find the concert tickets. Later, the friend arrived with the tickets, and they both headed off to the show anticipating a delightful musical experience. In the no-prime control, participants went to the chat room without reading any scenario. The no-prime control was not expected to produce different levels of conformity, compared with the scenario control. However, having both control conditions ensured that any potential differences in conformity between the control and the substantive motive conditions were not produced by the specific contents of the control scenario.

To assess whether the three different scenarios were effective at inducing the desired motives and their associated affective states, a separate group of 46 male and female participants underwent one of the three scenario prime manipulations. Immediately afterward, they indicated the extent to which they were experiencing threat, a desire to protect themselves, romantic arousal, and a desire to attract a romantic partner. Responses to these items were measured using 7-point Likert scales ranging from 1 (*not at all*) and 7 (*very much*). There were no interactions or main effects involving participant sex, indicating that the scenarios had a similar effect on men and women. As seen in Table 1, the self-protection scenario elicited significantly more feelings of threat and a stronger desire to protect oneself, compared with either the control condition or the mate-attraction condition ( $ps < .001$ ). Conversely, the mate-attraction scenario elicited significantly more romantic arousal and a stronger desire to attract a romantic partner, compared with either the control condition or the self-protection condition ( $ps < .001$ ). Thus, both the self-protection and the mate-attraction scenarios were effective at inducing the intended motives and associated affective states.

### Results

We measured the extent of participants’ conformity by examining the degree to which their public ratings of the target image were influenced by the ratings of their 3 group mates. Half the time, the ratings of the group were high (8, 8, 7), indicating a positive group judgment; half the time, the ratings were low (2, 2, 3), indicating a negative group judgment. Conformity by the participants in the former case was signified by higher ratings; conformity in the latter case was signified by lower ratings. For the statistical analyses, all ratings were standardized, whereby a higher

<sup>1</sup> The mate-attraction prime did not suggest that this encounter was a brief romantic fling, nor did the prime suggest that the encounter was the beginning of a meaningful relationship.

Table 1  
Mean Self-Reported Affect and Motivation for All Motive Prime Scenarios

Affect/motivation item	Control (n = 16)	Self-protection (n = 15)	Mate attraction (n = 15)
Threat			
<i>M</i>	2.00	5.20*	1.47
<i>SD</i>	0.89	1.74	0.92
Desire to protect yourself			
<i>M</i>	2.31	5.53*	2.07
<i>SD</i>	1.30	1.64	1.67
Romantic arousal			
<i>M</i>	1.63	1.53	5.00*
<i>SD</i>	0.96	1.25	1.81
Desire to attract romantic partner			
<i>M</i>	1.94	1.20	5.33*
<i>SD</i>	1.57	0.56	1.91

\*  $p < .001$ , indicates difference from control scenario.

rating by participants always constituted more conformity, regardless of whether group judgment was positive or negative.

The means for the conformity measure in the control conditions were all above the midpoint of 5.0, indicating that there was some degree of conformity in the control conditions as would be expected. Analyses indicated that there were no significant differences in conformity in either of the two control conditions between men and women. As expected, the two control conditions also did not significantly differ from one another, and the control condi-

tions were thus combined for the remainder of the analyses. To test the specific hypotheses of the study, we performed a series of planned contrasts, all using the preimage ratings as covariates.

*Conformity and Self-Protection*

It was predicted that a self-protective prime (compared with a control condition) would produce a significant increase in conformity for both sexes. As seen on the left side of Figure 1, a planned contrast comparing conformity in the control and the self-protection conditions indicated that this was indeed the case,  $F(1, 160) = 4.78, p = .030, \eta^2 = .029$ . Also consistent with predictions, the effects of the self-protection prime did not differ for men and women, and the effects of the prime remained similar regardless of whether the group judgment was positive or negative ( $ps > .50$ ). Thus, a state of threat produced an increase in conformity for both men and women, and this increase was unaffected by the valence of the group judgment.

*Conformity and Mate Attraction*

The effects of a mate-attraction prime (compared with a control) were predicted to be different for men and women. Consistent with this prediction, results indicated a significant two-way interaction with motive and participant sex,  $F(1, 177) = 6.33, p = .013, \eta^2 = .035$ . For men, it was predicted that a mating prime would produce less conformity, compared with the control, when group judgment was negative but not necessarily produce less conformity when group judgment was positive. Consistent with this prediction, results indicated a two-way interaction with motive and group

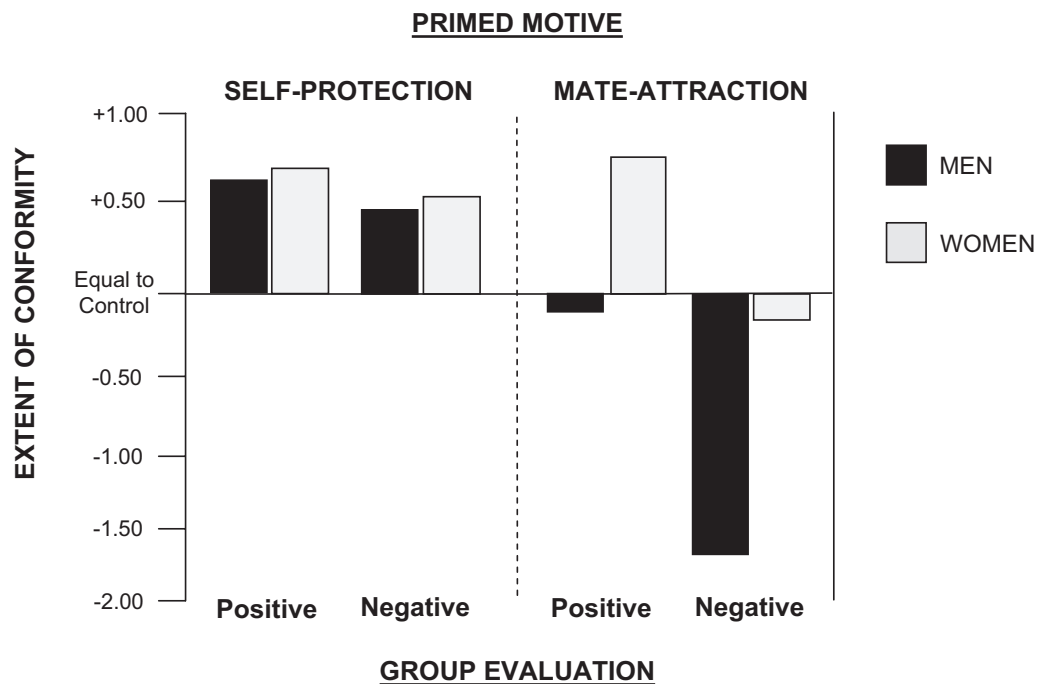


Figure 1. Effects of self-protection or mate-attraction motives on conformity depending on whether group judgment was positive versus negative (Study 1, adjusted means). Positive values denote an increase in conformity relative to the control; negative values denote a decrease in conformity relative to the control, or nonconformity.

judgment for men,  $F(1, 173) = 6.62, p = .011, \eta^2 = .037$ . As seen on the right side of Figure 1, when group judgment was negative, a mate-attraction prime led men to conform significantly less than men in the control condition,  $F(1, 44) = 9.57, p = .003, \eta^2 = .179$ . However, when the group judgment was positive, there was no difference between the mating and the control conditions for men ( $p > .95$ ). Thus, mating motives led men to go against the group specifically when group judgment was negative, meaning that nonconformity could be used to convey positive dispositional information.

For women, it was predicted that a mating prime would lead them to conform more primarily when group judgment was positive. Although the two-way interaction with motive and group judgment for women was not significant,  $F(1, 173) = 1.64, p = .20$ , as seen in Figure 1, women in the mating condition did conform somewhat more than women in the control condition when group judgment was positive,  $F(1, 41) = 3.61, p = .064, \eta^2 = .081$ . However, when group judgment was negative, the romantic prime had no effect on women's conformity relative to the control ( $p > .70$ ). Thus, a romantic mindset led women to conform somewhat more primarily when group judgment was positive, meaning that higher conformity could convey positive dispositional information about the women.

### Discussion

Study 1 showed that temporarily activating different fundamental social motives produced different and theoretically meaningful tendencies toward conformity and nonconformity for men and women. As predicted, a motive to protect oneself from danger—even imagined danger—led both men and women to conform more. Being in a state of fear produced more conformity regardless of whether the group judgment was positive or negative. That is, participants conformed more regardless of whether they would be conveying positive or negative dispositional information.

In contrast to a self-protection goal, a motive to attract a mate not only produced different effects for men and women, but each of these effects was qualified by whether the group judgment was positive or negative. For men, a romantic prime produced nonconformity specifically when the judgment of the rest of the group was negative. That is, a mating motive led men to go against the group when nonconformity could convey positive information about the men (e.g., "I am the type of person who generally likes novel things and I am independent"). However, when the group judgment was positive and nonconformity could not be used to convey positive information, the power of the mating motive to engender nonconformity was muted. For women, a romantic prime produced a trend toward more conformity specifically when the judgment of the group was positive. That is, a mating motive led women to go along with the group somewhat more when conformity could convey positive information about them. However, when group judgment was negative and conformity could not convey positive information, the power of the mating motive to increase women's conformity was muted.

These findings are consistent with an evolutionary functional perspective of social influence (Sundie et al., in press). It is also notable that a mating prime produced these sex-specific (non)conformity effects even when the group was composed of same-sex individuals. That is, even in a situation that did not directly involve attracting a mate, simply being in a mate-attraction mindset pro-

duced functional patterns of conformity. This finding suggests that priming a fundamental social motive, such as mate attraction, may activate a specific mental set that serves to facilitate cognitions and behaviors in a relatively automatic manner. It also is consistent with the possibility that males compete with one another for status, and that females are not so much directly attracted to the competitiveness per se but to the indirect result—that is, to status as reflected in relative standing among other males (Sadalla et al., 1987).

### Study 2

The initial study showed that, when men were primed with a motive to attract a mate, they tended to go against the group (at least when group judgment was negative). Although this tendency to nonconform for men makes sense from a consideration of sex differences between mating and the desire to appear independent, men's nonconformity is nevertheless puzzling. Given that conformity is generally adaptive because it leads to increased accuracy in decision making, men's tendency to nonconform indicates that mating motives appear to lead men to behave less adaptively by disregarding any potential gains in accuracy afforded by conformity. From a functional perspective, however, this perplexing dilemma might be better understood if one considers the content of the topic on which a person is likely to be nonconforming.

A closer look at conformity and minority influence research reveals a potentially crucial distinction in the kinds of content that are generally used across studies: Sometimes the topic is subjective (e.g., preferences, opinions), and at other times it is objective (e.g., trivia questions; see Maass, Volpato, & Mucchi-Faina, 1996). Conformity pressures operate both when topics are subjective (e.g., Allen, 1975; Santee & Maslach, 1982) and objective (e.g., Sherif, 1936). However, there is a key difference between the two types of content: A subjective quandary by definition does not have a verifiably correct answer, whereas an objective predicament does. For instance, consider the objective dilemma in the TV game show *Who Wants to Be a Millionaire?*: Contestants unsure of an answer to a multiple-choice question can poll audience members for their responses; although the audience is never unanimous, the response favored by the majority tends to be correct over 90% of the time, and it is almost always chosen by the contestant (Surowiecki, 2005).

A situation with an objectively optimal solution, therefore, introduces the powerful self-presentational consideration of being perceived as right (as well as the objective benefit of avoiding a faulty choice). Indeed, the self-presentational and objective benefits of being verifiably correct on an issue should outweigh those of being merely like or unlike the majority. After all, someone who nonconforms on a topic, but is shown to be objectively wrong in his or her choice, is hardly likely to make a favorable impression on a romantic candidate. Thus, we may expect that, in contrast to Study 1, in which the topic was subjective, when a topic has an objective, demonstrably correct position, mating motives should lead both men and women to conform more to the majority view, because the majority typically counsels correctly in such matters (Laughlin, Zander, Knievel, & Tan, 2003; Surowiecki, 2005).

Study 2 tested how a motive to attract a mate would influence men's and women's conformity on subjective versus objective topics (compared with participants primed with a neutral motive). Unlike in Study 1, in which the group could indicate a positive or

a negative judgment, the conformity situations in the present study were constructed in a way that neutralized the role of whether (non)conformity would convey positive versus negative dispositional information. As in Study 1, it was predicted that when the topic was subjective, a mating prime would lead men to nonconform and would lead women to conform more. In contrast, when the topic was objective, it was predicted that a mating motive would lead to a general increase in conformity. To broaden the findings from the initial study, we used a new set of conformity measures. In addition, we examined whether the predicted effects would persist when responses were private and could not directly be seen by others.

### Method

#### Participants

Sixty-nine participants (38 male, 31 female) were recruited from introductory psychology classes as partial fulfillment of a class requirement. As in Study 1, participants came in groups and were seated a computer.

#### Design and Procedure

The study used a 2 (participant sex)  $\times$  2 (motive prime: mating vs. control)  $\times$  2 (topic: subjective vs. objective) mixed-factorial design; participant sex and prime were between-participants factors, and topic was a within-participants factor. After they entered the laboratory, participants underwent the same mating and control prime procedure from Study 1. (Given that there was no difference between the no-prime and scenario controls in Study 1, only the scenario control was used in Study 2.) After the prime manipulation, participants responded to a six-question survey in which they could see the percentages of previous survey takers who had selected certain responses. Participants' responses to the survey items constituted the dependent measure of conformity in the study.

Of the six survey items, three items were subjective and three were objective. All of the subjective items asked participants for their preference between two choices that, within our sample population, were deemed relatively similar to each other: (a) a Mercedes-Benz or a BMW luxury car; (b) a silver or forest green car color; (c) and a Ferrari or a Lamborghini sports car. Asking participants to select a preference between two similarly desirable items enabled us to neutralize the positivity/negativity dimension that moderated the effects of the mating prime in Study 1. That is, in Study 2, neither conformity nor nonconformity could convey positive versus negative information about the participant.

Each of the three objective items asked participants a factual question, and they were provided with two possible responses, one of which was correct: (a) Do you think it's more expensive to live in New York City or in San Francisco? (b) Which airline has more on-time arrivals, Southwest or America West? (c) Which color shirt is better at keeping a person cool in the sun, green or blue? These items were chosen because any given participant in our sample would generally not know the correct answer to these questions, but he or she should believe that a majority response would likely constitute the correct answer. All six items were presented in random order, and participants had to indicate their responses on a 7-point scale ranging from 1 (definitely Option A) to 7 (definitely Option B) at the endpoints.

Participants were informed that over 100 students had already taken the survey and that the responses of previous students would be visible during the time of the survey. They were told that this information was simply a by-product of the survey software and that they should be free to ignore it. For each item, participants could see the percentages of respondents who had chosen either of the two possible options for a given question (e.g., 70%/30%). The percentages for the six items indicated that a substantial majority (between 72% and 89%) had selected one of the two responses.

The pairings of the majority responses with the specific survey items and the specific responses within each item were counterbalanced.

### Results

As in the first study, all the counterbalanced items were standardized, whereby a higher number indicated more conformity regardless of which particular response was favored by the majority. A test of possible sex differences in the control condition indicated no significant differences in conformity for men and women. It was predicted that the mating prime would produce different patterns of conformity for men and women and that these patterns would be qualified by whether the topic was objective or subjective. Consistent with this prediction, a repeated-measures analysis of variance (ANOVA) with participant sex, motive, and topic produced a significant three-way interaction,  $F(1, 65) = 15.20, p < .001, \eta^2 = .190$ . To test the specific hypotheses of the study, we performed a series of planned contrasts.

#### Conformity on Subjective Items

When topics were subjective, it was predicted that a mate-attraction motive would lead men to nonconform and would lead women to conform more. Consistent with this prediction, an ANOVA with participant sex and motive revealed a significant two-way interaction,  $F(1, 65) = 12.14, p = .001, \eta^2 = .157$ . As seen in Figure 2, men in the mating condition conformed significantly less than men in the control condition,  $F(1, 67) = 5.19, p = .026, \eta^2 = .072$ . Conversely, women in the mating condition conformed significantly more than women in the control,  $F(1, 67) = 7.36, p = .008, \eta^2 = .099$ . This pattern for men and women

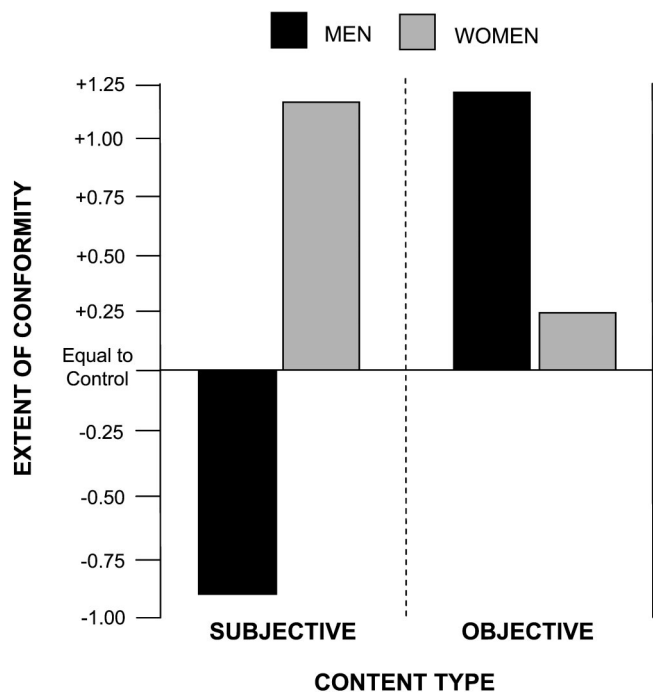


Figure 2. Effects of mate-attraction motives on conformity depending on whether content was subjective versus objective (Study 2). Positive values denote an increase in conformity relative to the control; negative values denote a decrease in conformity relative to the control, or nonconformity.

on subjective topics conceptually replicates the findings from Study 1.

### *Conformity on Objective Items*

When topics were objective, it was predicted that a mate-attraction prime would lead men and women to conform more. As seen in Figure 2, men and women both tended to conform more on the objective items in the mating condition compared to the control,  $F(1, 65) = 5.16, p = .026, \eta^2 = .074$ . Although the mating prime increased conformity somewhat more for men than for women, the Motive  $\times$  Participant Sex interaction was not statistically significant,  $F(1, 65) = 3.54, p = .064$ . Thus, when topics were objective, a mate-attraction motive tended to generally produce an increase in conformity, although this increase was greater for men than women.

### *Discussion*

Despite the fact that this study used conformity measures different from those in the initial study, the results of Study 2 conceptually replicated and extended the findings of Study 1. When the topic was subjective, mating goals led men to nonconform and led women to conform more. In contrast, when the topic was objective, mating motives produced the predicted increase in conformity for men and women, as being objectively wrong is unlikely to make a favorable impression on a romantic candidate. Thus, mating motives lead men to show independence only on topics that are subjective, when they do not risk the self-presentational consequences of being proven wrong. Notably, the effects of the mating prime persisted although participants' responses were ostensibly private. These findings further support the notion that priming fundamental social motives appears to activate specific mental sets that automatically facilitate functional cognitions and behaviors. That is, a relevant audience—or even any audience—did not appear to be necessary to produce the effects.

### *Study 3*

Although the results from the first two studies provide preliminary evidence indicating how fundamental social motives influence conformity, it is not fully clear exactly why mating motives produce the specific patterns of behavior. As discussed earlier, we hypothesized that, for men, a mating motive should produce nonconformity when it enables men to be relatively unique and appear assertive and independent—desirable traits in male romantic partners and high-status men (Barkow, 1989; Baumeister & Sommer, 1997; Buss, 2003). In larger groups, such as a group of over 100 people, a man could achieve relative uniqueness by going against the preferences of the majority, even if that majority is not unanimous. As in Study 2, a man who is 1 of 10 people to prefer a BMW can still appear relatively distinct if 100 other men prefer a Mercedes. In fact, it would be rare and possibly disturbing if everyone had the same exact preference in a large group. However, to be distinctive in a small group (e.g., 5 individuals), a man is likely to be highly sensitive to the degree of consensus on a given topic. That is, it is difficult to be distinct when a man is 1 of the 2 people who prefer a BMW, compared with 3 people who prefer a Mercedes. Note that in Study 1, in which groups consisted of 4 persons, mating motives led men to nonconform when the majority

preference between two alternatives was unanimously one-sided. However, would men still have nonconformed if consensus opinion was split into a majority of 2 and a minority of 1? According to the present perspective, if a majority in a small group is not unanimous, nonconformity is unlikely to enable a man effectively to appear unique or assertive; instead, the man may merely appear to be a follower of a minority of 1.<sup>2</sup>

For women, we hypothesized earlier that a mating motive would lead to more conformity because it would allow women to appear agreeable and as someone interested in fostering group cohesion—desirable traits in a female romantic partner (Barkow, 1989; Buss, 2003; Campbell, 2002). In large groups of people, a woman could appear agreeable by conforming with the majority even if that majority is not unanimous. However, just as for men, women in a small group are likely to be sensitive to the degree of consensus on a topic. In Study 1, for example, mating motives led women to conform more when the majority was unanimous. However, if the group was split into a majority of 2 and a minority of 1, going along with 2 people (and going against 1 person) is less successful at conveying agreeableness to the group members or fostering group cohesion.

Study 3 tested how a mating motive would influence men's and women's conformity depending on whether the majority in a small group (5 people) was unanimous versus split. It was predicted that mating motives would produce nonconformity for men and produce conformity for women primarily when the majority was unanimous but not when it was split. In line with the first two studies, these outcomes were only predicted to occur on topics that were subjective. When topics were objective, it was predicted that mating motives would generally lead people to increase their conformity, especially when a small majority was unanimous, as this would be a much stronger indicator of a correct response (Insko, Smith, Alicke, Wade, & Taylor, 1985).

### *Method*

#### *Participants*

Two hundred fifteen participants (118 male, 97 female) were recruited from introductory psychology classes as partial fulfillment of their class requirement. As in the first two studies, participants came in groups and were seated at private computers.

#### *Design and Procedure*

In this study we used a 2 (participant sex)  $\times$  2 (motive prime: mating vs. control)  $\times$  2 (topic: subjective vs. objective)  $\times$  2 (majority type: unanimous [4/0] vs. split [3/1]) mixed-factorial design. Participant sex and prime were between-participants factors, and topic and majority type were within-participants factors.

The procedure was very similar to that of Study 2, except for several small changes. First, participants responded to 10 instead of 6 survey items. Of the 10 items, 4 were subjective, 4 were objective, and 2 of the items served as fillers. For the subjective items, the same 3 items from the previous study were used along with one new item: Would you prefer to

<sup>2</sup> It is also consistent with the present perspective that if there were more than two options in such a situation, a mating motive may be effective at spurring men to select a third—or any other—option, which would enable them to stand out and assert their independence (see Santee & Maslach, 1982).



have a painting by Van Gogh or Monet? For the objective questions, along with the 3 previous items, the fourth item asked: Which country do you think has more consumers, Finland or Norway?

As in Study 2, participants could see the responses of previous survey takers. However, it appeared that only 4 individuals had thus far completed the survey. Because participants were told that the survey questions changed rather frequently, they had no reason to be suspicious of the low number of respondents. The viewable responses of the 4 previous survey takers were strategically arranged. The two filler items were always split 2/2 (i.e., 2 people had indicated a preference toward one response, whereas 2 other people had indicated a preference for the opposing response). One of these filler items always appeared first on the survey to decrease suspiciousness. Of the four subjective and four objective items, half had previous responses that were unanimous (4/0), and half of the items had previous responses showing that the majority was split (3/1). The pairings of the two types of majorities with the specific survey items and the specific responses within each item were counterbalanced.

*Results*

As in the first two studies, regardless of the particular choice advocated by the majority, participants' responses were converted into a conformity index for each item, whereby higher numbers indicated a higher degree of conformity. There were no significant sex differences in conformity in the control condition. To test the specific hypotheses of the study, we performed a series of planned contrasts for the subjective items and the objective items.

*Conformity on Subjective Items*

When topics were subjective, it was predicted that mating goals would (differentially) influence men and women's conformity depending on whether the majority was unanimous versus split. Consistent with this prediction, results indicated a three-way interaction with participant sex, motive, and majority type, although this interaction was not conventionally significant,  $F(1, 213) = 2.84, p = .093, \eta^2 = .013$ .

When the majority was unanimous, it was predicted that a mating prime would lead men to nonconform and a mating prime would produce more conformity for women. Consistent with this prediction, results indicated a significant Participant Sex  $\times$  Motive interaction when the majority was unanimous,  $F(1, 213) = 9.30, p = .003, \eta^2 = .042$ . As seen on the left side of Figure 3, when the majority was unanimous, men showed a significant decrease in conformity in the mating condition, compared with the control,  $F(1, 213) = 7.45, p = .007, \eta^2 = .034$ . In contrast, a mating prime led women to conform somewhat more, although this difference was not conventionally significant,  $F(1, 213) = 2.22, p = .138, \eta^2 = .010$ .

When the majority was split, it was predicted that the effects of the mating motive on subjective conformity would be muted. Indeed, as seen in Figure 3, there were no significant interactions with participant sex and motive, main effects, or simple effects when the majority was split (all  $ps > .70$ ). Thus, in summary, when topics were subjective, a mating prime led men to nonconform in a small group when the group was unanimous—that is, when going against the group could make the men distinct. For women, a mating prime produced somewhat higher conformity in a small group when the majority was unanimous—that is, when going along with the group would be particularly effective at displaying agreeableness and fostering group cohesion for women.

*Conformity on Objective Items*

When topics were objective, it was predicted that a mating prime would produce an increase in men and women's conformity primarily when the majority was unanimous, but not necessarily when the majority was split. Consistent with this prediction, results indicated a Motive  $\times$  Majority Type interaction for objective items, although this interaction was not conventionally significant  $F(1, 213) = 3.44, p = .065, \eta^2 = .016$ . As seen in Figure 3, when the majority was unanimous, a mating prime produced a signifi-

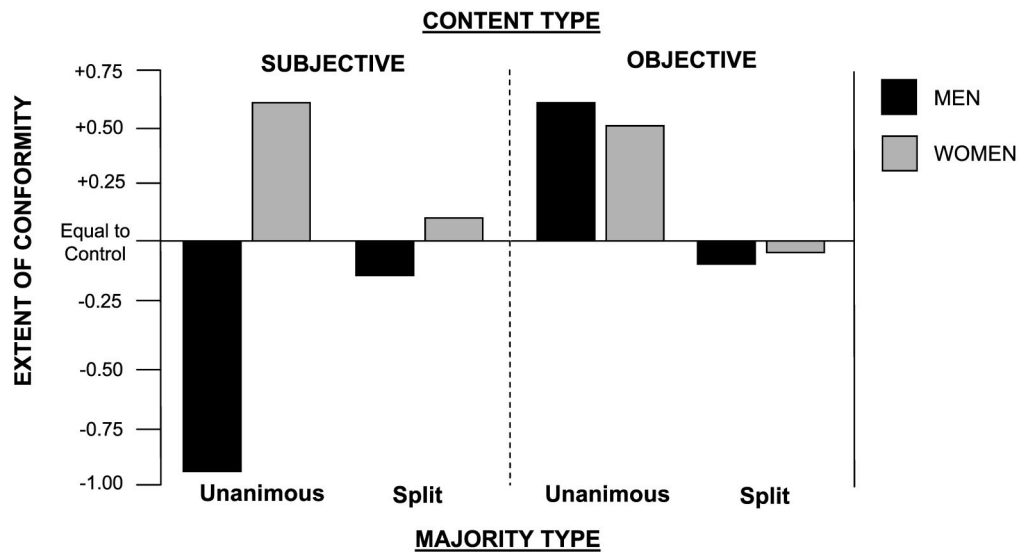


Figure 3. Effects of mate-attraction motives on conformity depending on whether content was subjective versus objective, and on whether the majority was unanimous or split (Study 3). Positive values denote an increase in conformity relative to the control; negative values denote a decrease in conformity relative to the control, or nonconformity.

cant increase in conformity for men and women, compared with the control,  $F(1, 211) = 3.88, p = .050, \eta^2 = .018$ . When the majority was split, however, a mating prime failed to produce a difference from control for men or women (all  $ps > .75$ ). Thus, a mating prime produced an increase in conformity on objective items only when the majority was unanimous, which is precisely when men and women could have more confidence in the accuracy of the majority position.

### Discussion

The results of Study 3 conceptually replicated and extended the findings from the previous two studies by illuminating the processes by which mating motives differentially influence men's and women's conformity. First, as in Study 2, when the content was objective, mating motives tended to produce an increase in men and women's conformity. As would be expected, this increase was strongest when the majority of four was unanimous, which is a stronger indicator of the correct response compared with a split consensus of 3 to 1. Second, when content was subjective and the majority of 4 was unanimous, mating motives led men to nonconform and produced a pattern of higher conformity for women. However, when consensus opinion in the group was split into a majority of 3 and a minority of 1, mating motives failed to influence either men's or women's conformity.

This unanimous-only finding for men in small groups supports the notion that mating motives lead men to go against the group likely because they motivate men to appear unique and assertive. Each of these self-presentational goals can be optimally achieved through nonconformity primarily when the majority in a small group is unanimous. When consensus is split into a majority of 3 and a minority of 1, going against the group is less likely to make men look unique or assertive. The unanimous-only pattern for women supports the idea that mating motives are likely to lead women to conform more in part because they motivate them to appear agreeable and foster group cohesion. Each of these self-presentation goals can be optimally achieved through conformity primarily when the majority in a small group is unanimous. When consensus is split into a majority of 3 and a minority of 1, going along with the group is less effective at enabling women to appear agreeable and fostering group cohesion for the entire group.

The findings of this study may initially appear at odds with the findings from Study 2. In that study, mating motives led men to nonconform and led women to conform more even though the majority was not unanimous. However, there is a key methodological difference between the studies: In Study 2, the ostensible "group" consisted of over 100 individuals; whereas in this study, the group consisted of only 5 individuals, including the participant. Given that mating motives should produce male nonconformity when going against the group enables men to be relatively distinct, the effectiveness of the mating prime to produce nonconformity should depend on the size of the group and the size of the majority. In larger groups, relative distinctiveness can be achieved via nonconformity even if the majority is not unanimous; that is, a person can appear relatively distinct if he is one of 10 people who prefer Option A compared with 100 people who prefer Option B. In a small group, however, being 1 of the 2 people who prefer Option A compared with the 3 people who prefer Option B is much less effective at achieving distinctiveness. A similar rationale also applies to women: The effectiveness of conformity to convey

agreeableness or group cohesion depends on the size of the group and the size of the majority, whereby conformity is more effective at achieving these self-presentational goals in small groups when the majority is unanimous. Thus, the seeming inconsistency between the Studies 2 and 3 does not undermine the theoretical grounding of the predictions or the actual findings. Indeed, the findings appear to indicate that people are understandably sensitive to the size of the group and the size of the majority when opting to (non)conform.

### General Discussion

The present research examined how the temporary activation of two fundamental social motives—a motive to protect oneself from danger and a motive to attract a mate—influenced tendencies to conform. Findings indicated that a self-protective mindset led both men and women to conform more. That is, when people were motivated to avoid threat and to protect themselves from danger, they tended to go along with the group. In contrast, a mating mindset generally produced different effects for men and women. For men, the goal to attract a mate generally led them to go against the preferences of others; whereas for women, the goal to attract a mate generally tended to increase the likelihood that women would conform to the group. However, these general effects of mating motives on (non)conformity were qualified by three key factors.

First, as seen in Study 1, the effects of mating motives depended on whether the judgment of the group was positive or negative. That is, one's decision to (non)conform depended on whether the group opinion was essentially thumbs up or thumbs down. The valence of the group's judgment of a novel stimulus strongly influences what kind of dispositional information would be conveyed by a person's (non)conformity. For men, a romantic prime produced nonconformity specifically when the judgment of the group was negative. However, when group judgment was positive—and nonconformity could not be used to convey positive information—the effect of the mating motive to engender nonconformity was muted. For women, a romantic prime tended to produce somewhat more conformity specifically when the judgment of the group was positive. However, when group judgment was negative—and conformity could not convey positive information—any effect of the mating motive for women was muted. Notably, the valence of the group's judgment had no influence on the effectiveness of self-protection goals to increase conformity, suggesting that self-protection goals are less sensitive to concerns of positive or negative self-presentation.

Second, as seen in Studies 2 and 3, mating goals led men to nonconform only on topics that were subjective. That is, men went against the group only when they couldn't be proven to be incorrect and when going against the crowd could not result in choices that were less accurate. In contrast, when the topic was objective, mating motives actually caused men to conform more. This finding makes sense given that going against the majority opinion on a matter of objective fact is not likely to be the most adaptive behavior, and is often subject to being verified as foolish as opposed to independent. The effects of mating motives for women, however, who tended not to take stands against group opinion, did not depend on whether the topic was subjective or objective.

Third, as seen in Study 3, when in a small group, mating goals led men to nonconform and led women to show somewhat of an increase in conformity only when the majority of the group was

unanimous. When group opinion was split into a majority of 3 and a minority of 1, the effects of mating motives were muted for men and women. This finding for men supports the assumption that mating motives lead men to desire to appear unique and assertive, which are desirable characteristics in a male mate. The same motive, in contrast, seems to lead women to appear agreeable and foster group cohesion, which is a desirable characteristic in a female mate. However, as seen in Study 2, when the group consists of many individuals (e.g., over 100 people), mating motives will lead men to nonconform and lead women to conform, even when the (large) majority is not completely unanimous.

### *Fundamental Motivations and Strategic Self-Presentation*

The findings from all three studies fit with a functional domain-specific model of motivation and behavior. Moreover, the results indicate that fundamental motives, such as mate attraction, can stimulate specific forms of conformity or nonconformity in the service of strategic self-presentation. Notably, the effects of the mating motive were obtained even when groups consisted of same-sex individuals (Study 1) and when people's responses were ostensibly private (Studies 2 and 3). That is, a mating mindset led men to go against the group and led women to go along with the group even when such behavior could not produce tangible benefits for the (non)conformist. Consistent with other research that activates similar motives (e.g., Maner et al., 2005; Wilson & Daly, 2004), the activation of these fundamental social motives appears to activate specific mental sets that serve to facilitate functional perceptions, cognitions, and behaviors that often occur automatically and outside of the awareness of the participant. For example, Roney (2003) found that men reported greater ambition and desire to earn more money in the presence of desirable women or when the men merely looked at photos of desirable women. Although the presence of a relevant audience may strengthen the tendency for functional behaviors, a relevant audience—or even any direct audience—appears unnecessary to elicit the motive-driven behaviors.

### *Alternative Explanations*

Although the present research has adopted a functional evolutionary framework to examine the relationship between various social motives and conformity, it would be possible to derive predictions regarding how various primes would affect conformity from several other theoretical perspectives. However, none of these alternative approaches seems to offer as straightforward an account of the pattern of results obtained in this series of studies. For example, it is possible that the effects of a mating prime for men may have been caused because the prime produced more positive affect and arousal for men than women. Although it is unlikely that the prime produced more positive mood or arousal for men (see Griskevicius, Cialdini, & Kenrick, 2006), even if the mating scenario did produce more positive affect for men, such a finding would not constitute a particularly compelling alternative explanation of the effects. In particular, the affect explanation would suggest that positive affect leads men to nonconform in some circumstances while leading them to conform more in other situations. Although the possibility of higher positive affect for men would suggest a potential mechanism for why these (non)conformity effects occur for men, it would raise the question of

why and how a mating prime would produce more conformity for women.

It is also possible that the link between mating, self-protection, and conformity is due to simple mechanisms of associative priming (Srull & Wyer, 1979; see Higgins, 1996, for a review). Research has shown, for example, that when people are primed with scrambled sentences alluding to conformity, they tend to conform more to social pressure (Epley & Gilovich, 1999). Although priming people with self-protective or romantic scenarios may very well activate conformity- or nonconformity-related concepts, it is difficult to see how an associative model framework could account for the very specific pattern of sex differences and similarities in nonconformity as well as conformity that was observed in this research. Moreover, such a perspective would have difficulty explaining why the primes produced responding that was highly sensitive to the specific features of a given situation in ways that supported a more articulated interaction with different goals.

The functional framework used in this research is by no means an alternative to the associative network model of cognition. Both models imply that there are certain links between motivation, cognition, and behavior. However, the functional model does more than just assert that priming specific ideas will lead to the activation of associatively linked semantic and affective categories. Rather, the functional model leads to articulated predictions regarding how activating specific functional goals should lead to specific goal-consistent—and sex-consistent—cognitive and behavioral responses (Maner et al., 2005).

A social learning model may suggest that men and women have been differentially rewarded for their conformity or nonconformity, although it is again difficult to predict from this perspective the precise pattern of sex differences and similarities, as well as the sensitivity of the behaviors to specific contexts, that we found. Social role theory may suggest that men are taught and rewarded for being tough and resolute. However, in this research, cues connoting danger, which may be predicted to provide men a perfect opportunity to show their toughness and stout independence, caused men to be highly conforming, which is inconsistent with appearing tough and independent. Social role theory may also suggest that, in order to attract mates, men are taught to present themselves as independent and autonomous from the judgments of others. Indeed, although men displayed such behaviors some of the time, a mating motive actually led men to become less independent and less autonomous when topics were objective—a specific prediction clearly derived from a functional perspective.

Neither social role theories nor social learning theories are mutually exclusive with functional evolutionary accounts, since evolutionary theorists presume that social roles across societies are a function of evolutionary constraints on men and women and that many behaviors involve an adaptive interplay of learning and evolved predispositions (Kenrick, Trost, & Sundie, 2004; & Öhman & Mineka, 2001). We are not aware, however, of predictions made by social role or social learning theories for the very specific patterns of results obtained here—patterns that follow directly from considerations of how different fundamental social goals can be achieved through specific self-presentation behaviors for men and women.

### Limitations and Future Directions

One of the limitations of the present research is that it did not examine conformity in face-to-face interactions. Although we conducted Study 1 using a virtual group chat room setting with an expectation of a face-to-face discussion, the functional perspective suggests that the effects of fundamental motives are likely to be even stronger in real groups, where people would have more to gain through strategic self-presentation. People's everyday experiences of conformity are also partly shaped by their cultural context (Bond & Smith, 1996; Kim & Markus, 1999). Although the present studies examined how fundamental motives influence self-presentation via conformity and nonconformity in one culture, an evolutionary functionalist perspective holds that mate-attraction motives should activate a desire to positively differentiate oneself from one's rivals and to present oneself in a positive light in all cultures. However, the specific contexts in which conformity or nonconformity is seen as an appropriate way to achieve these goals will surely depend on cultural or local norms (Norenzayan & Heine, 2005; Norenzayan, Schaller, & Heine, in press).

The mating prime used in the current research is likely to have aroused feelings related to lust rather than to stable attachment. It would be interesting to explore in future research what kinds of behaviors would be produced by eliciting feelings of stable love or attachment. For example, a prime of an elderly affectionate couple is unlikely to produce the same (non)conformity effects as in the present research because it is unlikely to sufficiently activate motives related to mate attraction. However, thoughts of stable attachment may lead men to conform more than they may otherwise because a desire for attachment may produce a desire to belong to a group.

The romantic prime used in the present work was ambiguous regarding whether it activated a desire to attract a short-term versus a long-term mate. Given that the type of mating strategy one is pursuing is related to strategically different self-presentation (e.g., Buss & Schmitt, 1993), it would be interesting to explore in future research whether activating an explicit short-term versus a long-term mating goal would have a different effect on men and women's (non)conformity. Given that leadership qualities in men are valued in both short-term and long-term mates, it seems likely that both types of mating goals would lead men to go against the group. However, to the extent that women are under more pressure to display agreeableness and group cohesion to a potential long-term mate, the desire to attract a long-term romantic partner may produce more conformity for women than a desire to attract a short-term mate. In addition, certain individual differences, such as one's sociosexual orientation (Simpson & Gangestad, 1991, 1992) and romantic relationship status, may also influence a person's self-presentational tactics (Simpson et al., 1999).

### Conclusion

There has been a long-standing debate about whether men are more nonconforming than women. The research we have presented here suggests that the answer depends in part on the goal that is currently active for a man or a woman deciding whether to go along or to go alone. It further suggests that being a conformist or a nonconformist is not simply a trait of men or women that manifests itself without regard to situational inputs. Self-protective motivation leads both men and women to increase their general

tendency to conform with a group's opinions. Mating motivation, on the other hand, leads to a particular and very functional pattern of nonconformity for males—who will go it alone against a group, but only if such independence cannot be objectively proven to be erroneous and if they are not following another individual who has already defied the group.

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