Gendered Feelings of Power and Helpfulness
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ABSTRACT. Implicit social cognition research has shown that power promotes action-taking. Yet, power also reduces perspective-taking, a cognitive function associated with prosocial behavior. This experiment investigated the effect of power primes on helpfulness. The researchers hypothesized that participants primed with high power would be less helpful, on average, than those primed with low power. Fifty-nine college students were randomly assigned to either the high or low power condition and were asked by one of the two researchers to write about a personal experience related to power. The study gave participants \((n = 59)\) two opportunities to help: donating earnings from the study to charity and picking up pencils spilled by the other researcher. The results showed no significant main effect for power or gender on either measure of helpfulness. There was, however, a significant interaction in a 3-way ANOVA between power prime, gender, and researcher in the role of pencil-dropper on helping with the pencils, \(p = .007, \eta_p^2 = .14\). There was also a significant interaction between power and gender on helping with the pencils, \(p = .008, \eta_p^2 = .14\). Results are discussed in terms of action-taking and gender role expectations. These findings illustrate the necessity of examining gender when looking at how power affects behavior because power can elicit different mental states and emotions in men and women.
The phenomena related to implicit cognition often have been studied through the use of priming techniques, such as the unconscious exposure to a certain stimuli (e.g., words, ideas or concepts) followed by the indirect measurement of behavior(s) to ascertain any implicit effects (Bargh & Pietromonaco, 1982; Bargh & Williams, 2006; Cameron, Brown-Iannuzzi, & Payne, 2012; Galinsky, Gruenfeld, & Magee, 2003; Greenwald & Banaji, 1995; Payne & Gawronski, 2010). Priming allows researchers to study phenomena that may affect people at unconscious, inaccessible levels. The use of mindset priming takes this experimental manipulation a step further by asking participants to actively recall or imagine a specific experience, thereby enhancing and prolonging any effects of the prime (Gollwitzer, Heckhausen, & Steller, 1990). This research into implicit social cognition has shown how previous experiences and current mindsets can unconsciously affect our behavior.

Power

Power is important to social interaction. The concept of power specifically relates to people, possibly in positions of authority, who can control resources without social interference (Fiske, 2010; Galinsky et al., 2003; Keltner, Gruenfeld, & Anderson, 2003). There are a variety of theories surrounding the effects of power (Brauer & Bourhis, 2006). Although power has been studied in a number of ways in the field of social psychology, implicit social cognition research on power has focused on how individuals’ social positions and power mindsets might implicitly affect their social behavior. For example, one study showed that different power motivations, socialized versus personalized, led to different outcomes (Magee & Langner, 2008). Specifically, socialized (other-serving) power motivations led to more deliberation and more prosocial outcomes, and personalized (self-serving) motivations led to less deliberation and more antisocial outcomes (Magee & Langner, 2008).

Power mindsets result in a variety of often conflicting interpersonal behaviors (Galinsky et al., 2003; Galinsky, Magee, Inesi, & Gruenfeld, 2006; Magee & Langner, 2008). One major implicit mindset that power can impact is action-taking. The possession of situational power and even the priming of high power mindsets have been shown to lead to goal-orientations and, thus, more action-taking (Galinsky et al., 2003). Another major implicit mindset is perspective-taking.

Perspective-Taking and Prosocial Behavior

Power has been shown to increase self-interested behavior and thus reduce perspective-taking (i.e., the cognitive ability to be aware of and take on others’ perspectives; Galinsky et al., 2006). Perspective-taking may play a role in prosocial behavior. A person exhibiting reduced perspective-taking may be unaware that another person needs help, as well as be less likely to empathize, perhaps leading to reduced prosocial behavior. Underwood and Moore (1982) showed that social perspective is correlated with generosity, thus a person who takes on the viewpoints of others is more likely to be supportive of a social cause, such as a charity. Coke, Batson, and McDavis (1978), proposed a two-stage model of prosocial behavior and found that perspective-taking leads to empathy and empathy leads in turn to helping behavior. In other words, people may be more inclined to help each another when they are socially aware because they may be empathic to each other’s needs.

Another factor that may affect prosocial behavior is money. Money primes have been shown to reduce prosocial behavior and to prompt people to spend more time alone rather than be socially intimate in proximity to others (Vohs, Mead, & Good, 2006, 2008). In an experimental setting, confederates dropped pencils to examine participants’ prosocial behavior (i.e., picking up pencils). Participants primed with more money picked up fewer pencils than participants primed with less money and those in the control group (Vohs et al., 2006). Additionally, participants primed with money donated less money to charity than participants not primed with money.

In implicit social cognition research, prosocial behavior is most often measured behaviorally in terms of helping to complete a task (e.g., Vohs et al., 2006, 2008). Helping can be categorized into two types: nonspontaneous and spontaneous helping (Benson et al., 1980). It has been found that each type of helping is impacted by different personal and situational factors. For example, personal traits are more likely to influence nonspontaneous helping, such as volunteer work, and situational factors are more involved in affecting spontaneous helping, such as helping a stranger (Benson et al., 1980). Spontaneous helping is often examined in social psychology research because it captures a person’s immediate behavior in a situation. The current study measured helping in a staged experiment where the participants had two spontaneous opportunities to help.
Power and Helpfulness

Societal power structures of gender influence experiences of power and decisions of whether and how to help others (Carli, 1999; Eagly, 2009; Haines & Kray, 2005; Keltner et al., 2003; Keshet, Kark, Pomerantz-Zorin, Koslowsky, & Schwarzwal, 2006). Previous research on gender (defined as participants’ classification as a man or woman) and prosocial behavior documents differences in how women and men help others (Eagly, 2009). This helping behavior is often consistent with gender roles expectations; women tend to be prosocial in a caring, interdependent, communal way, but men tend to be prosocial in an agentic, independent, collective way (Eagly, 2009). Examinations of power and gender have mostly consisted of looking at differences in men’s and women’s access to and types of social power (Carli, 1999) and their respective strategies of social influence related to gender expectations (Keshet et al., 2006). There has been research into how access to power can change women’s explicit and implicit self-concepts, in that self-identification with terms such as dominant and masculine increased for women who had been primed with feelings of power on prosocial behavior by mirroring a study that used money primes (Galinsky et al., 2003; Galinsky et al., 2006) and then measuring their helpfulness in two subsequent situations. Participants were given two opportunities to help: donating earnings from the study to charity and picking up pencils spilled by a confederate (Vohs et al., 2006). Given the involvement of perspective-taking in helping behavior, we expected high power primes to reduce helpfulness. We hypothesized that participants, both men and women, primed with high power would be less helpful, donating less money and picking up fewer pencils on average, than those participants in the low power condition. We anticipated that the recollection of power would override men’s and women’s approaches to helping.

Method

Participants
Sixty college students agreed to participate in the experiment. One participant was excluded for not following instructions and two participants were excluded due to suspicions about both dependent measures (n = 57). Two additional people were excluded from analyses on the dependent helping measure of money because they were suspicious and two more were excluded because they had missing data (n = 53 for the money analysis). One person was excluded on the pencil dependent measure because they were suspicious (n = 56 for the pencil analysis). The current sample consisted of 16 men (28%) and 41 women (72%). This gender ratio in the study reflects fewer men to women than the university at large, but more men to women than in the psychology program. Ages ranged from 18 to 51, with a mean of 21.37 years of age (SD = 5.28). The participants in this study represented a range of grade levels: 15 first-year students (26%), 14 second-year students (25%), 14 third-year students (25%), 14 fourth-year students (21%), and 2 other (4%). Information regarding the ethnicity of the students was not collected.

Sampling Procedures
Participants were recruited on the campus of a small, private, urban university in the western United States via flyers, class announcements, and word of mouth. It was advertised that participants would earn $2 for their participation. The purpose of the study was advertised as “experiential memory
processing levels and associations.” The title was intended to be vague and to conceal the real purpose of the study. This deception was deemed necessary, given the social desirability of helpfulness and the aim to examine the implicit, and thereby unconscious, effect of power on behavior. The experiment was part of the first two authors’ honors project. The university’s Institutional Review Board approved the study (FY2011-023) prior to recruitment.

Design
The experiment used a between-subjects design. The manipulated independent variable was primed power mindset, high or low. The two dependent variables of helping were (a) the amount of earned money donated to a charity and (b) the number of spilled pencils picked up (Vohs et al., 2006).

Materials
Participants were asked to complete a power mindset prime to achieve high or low power priming (Galinsky et al., 2003). Participants in the high power condition received these written instructions:

Please recall a particular incident in which you had power over another individual or individuals. By power, we mean a situation in which you controlled the ability of another person or persons to get something they wanted, or were in a position to evaluate those individuals. Please describe this situation in which you had power—what happened, how you felt, etc. (Galinsky et al., 2003, p. 458)

Participants in the low power condition received these instructions:

Please recall a particular incident in which someone else had power over you. By power, we mean a situation in which someone had control over your ability to get something you wanted, or was in a position to evaluate you. Please describe this situation in which you did not have power—what happened, how you felt, etc. (Galinsky et al., 2003, p. 458)

Participants were also asked to complete a word association exercise. The researchers designed this task for the sole purpose of keeping the participant busy, and consisted of 30 fill-in-the-blank sentences (e.g. The ___ is orange; The dog jumped on the ___).

Procedure
The first and second authors traded-off playing the roles of the experimenter and the confederate (i.e., pencil-dropper). The experimenter met the participants and took them through the study, while the pencil-dropper waited in an adjacent room, observing through a two-way mirror.

Participants were scheduled for individual sessions through email. After giving consent, participants were asked to complete a writing prompt, which was a randomly assigned power mindset prime taken from Galinsky et al. (2003). Participants assigned to receive the high power prime were instructed to recall and write about an experience in which they had power over another person. Participants assigned to receive the low power prime were instructed to recall and write about a time in which someone else had power over them. Participants were asked to respond as thoughtfully as possible and were told that they had as much time as they needed to complete the writing prompt, which had nineteen lines on the page. The experimenter remained in the room seated with books and materials on her lap in a chair perpendicular to and behind the participant.

After completing the writing prompt, participants were told to complete a word association exercise (i.e., filler task). Once the participant began this task, the pencil-dropper, who was observing behind a two-way mirror, took this as her cue to enter the room. After knocking, she immediately entered the room where the participant was working. She acknowledged the researcher across the room and appeared apologetic for interrupting the research session. She was carrying several large books, a large shoulder bag and a cup of pencils, ostensibly bringing supplies to the experimenter. As she started toward the experimenter, she pretended to trip and spilled 25 pencils on the floor next to the participant. She exclaimed and apologized, then continued a few feet across the room delivering the arm full of books to the experimenter, and setting her bag down on a nearby chair. Next she returned to where the pencils had been spilled. If the participant was in the process of helping pick up pencils, the pencil-dropper would kneel, beginning to collect those pencils farthest away. If the participant did not help, the pencil-dropper would pick up all the pencils. All pencils were then handed to the experimenter, who discreetly counted and recorded the number picked up by the participant. The pencil-dropper exited the room, and the participant continued to
work on the filler task.

Upon completion of the filler task, the experimenter thanked the participant for participating and then paid the participant $2 in quarters. At this point, participants also filled out a receipt. The experimenter then received a staged phone call, which she explained she needed to take and hurried to leave. On her way out, the experimenter mentioned that the participant could donate to the United Way donation box, which was in the room by the door. The United Way was chosen because it supports a variety of causes and is especially well-known on campus. The experimenter then exited the room, closing the door behind her, providing the participant with a private opportunity to donate. The experimenter approached the participant as he or she left the experiment room and asked him or her to complete a demographic sheet including participant sex, age, and year in school. Participants were screened for knowledge of the variables and then debriefed. No participant expressed distress, but several were suspicious about the dependent measures and were excluded from the analyses (please see Participants section).

Results

Preliminary analyses were conducted to assess normality. The Kolmogorov-Smirnov test of normality showed that the dependent helping variables, amount of money donated, \( D = 0.36, p < .001 \), and number of pencils picked up, \( D = 0.42, p < .001 \), were not normally distributed. A logarithm transformation was performed on both of these variables to achieve normal distributions. However, these transformations did not affect the results, so for the sake of clarity, the original variables are referred to throughout.

One-way between-groups ANOVAs showed that the variables of time of day, day of week, and participants’ year in school did not have a significant impact on either of the dependent variables. Preliminary regression analysis also showed that age did not significantly predict helping with money, \( F(1, 55) = 1.16, p = .34 \) or helping with pencils, \( F(1, 56) = 1.17, p = .33 \).

Pencils

A 2 (power) x 2 (gender) x 2 (researcher) between-groups ANOVA was conducted. We planned this analysis because there were two pencil-droppers, both women, with possible differing levels of consistency in the pencil drops and differing heights. We did not find a statistically significant main effect for power on the number of pencils picked up, \( F(1, 48) = 1.14, p = .29, \eta^2_p = .02 \). Thus, our hypothesis that participants primed with high power would pick up fewer pencils than those primed with low power was not supported. Nor did we find a statistically significant main effect for gender, \( F(1, 48) = 0.98, p = .33, \eta^2_p = .02 \); overall men and women did not differ on the number of pencils picked up.

The interaction between power and gender was significant, \( F(1, 48) = 7.77, p = .008, \eta^2_p = .14 \), suggesting that in the high power condition, women picked up more pencils, on average, than men, but in the low power condition, men helped pick up more pencils, on average, than women (see Figure 1). However, who the pencil-dropper was affected the power and gender relationship, \( F(1, 48) = 8.08, p = .007, \eta^2_p = .14 \). Based on this, the data file was split to examine the interactions between power and gender by the researcher playing pencil-dropper.

A two-way ANOVA showed that when Researcher A played the role of pencil-dropper, there were no significant main effects and there was not a significant gender and power interaction for helping pick up pencils, \( F(1, 22) < .01, p = .97, \eta^2_p < .001 \) (see Figure 1). However, when Researcher B played the role of pencil-dropper, although there were no significant main effects, there was a significant gender interaction, \( F(1, 26) = 13.65, p < .01, \eta^2_p = .34 \) (see Figure 1). The gender and power interaction for helping with pencils showed that, in the high power condition, women helped pick up more pencils \( (M = 8.50, SD = 8.01, n = 12) \) than men \( (M = 0.00, SD = 0.00, n = 3) \) and, in the low power condition, men helped pick up more pencils \( (M = 9.60, SD = 9.10, n = 5) \) than women \( (M = 4.0, SD = 1.27, n = 10) \). Men and women were equally dispersed across power conditions and researcher groups; thus, although there were fewer men in the study, they were split evenly among conditions.

Money

Because there was no reason to expect any researcher differences on the donation variable, we planned a 2 (power) x 2 (gender) ANOVA to examine the impact of power and gender on helpfulness as measured by money donated. There was not a statistically significant main effect for power on the amount of money donated, \( F(1, 51) = .02, p = .89, \eta^2_p < .001 \). Thus, our hypothesis that participants primed with high power \( (M = 0.39, SD = 0.73, n = 26) \) would donate less than those
primed with low power was not supported \((M = 0.53, SD = 0.74, n = 29)\). There was also no statistically significant main effect for gender, \(F(1, 51) = 1.41, p = .24, \eta^2_p = .03\). Men \((M = 0.30, SD = 0.68, n = 16)\) and women \((M = 0.53, SD = 0.75, n = 39)\) did not significantly differ on the mean amount of money donated. In addition, the interaction effect between power and gender on the amount of money donated was not statistically significant, \(F(1, 51) = 3.79, p = .06, \eta^2_p = .04\). Using G*Power® (Faul, Erdfelder, Lang, & Buchner, 2007) to run a posthoc power analysis, power was .11, reflecting the challenge of finding significant results with a small sample size.

**Discussion**

We investigated whether men’s and women’s helping behavior would be affected by primes. Participants were primed with recollections of feeling powerful or powerless and given the opportunity to help by donating money to charity and picking up pencils spilled by a confederate (Vohs et al., 2006). We expected high power primes would reduce helpfulness more in men and women than those with low power primes. However, there were no main effects of the power primes on either the amount of money donated to charity or the number of pencils picked up. These findings did not support the hypothesis that high power primes would reduce helpfulness for both men and women. We note that our low \(N\), particularly in some cells, reduced the power to detect what may be meaningful differences.

Nonetheless, a significant three-way interaction between gender, power, and researcher was found for helping to pick up pencils. For the researcher who both experimenters agree was the better, more consistent pencil-dropper, women picked up more pencils, on average, than men in the high power condition, whereas men picked up more pencils, on average, than women in the low power condition. This significant relationship between gender and power may have occurred because being primed with power can reduce or promote action-taking, (Galinsky et al., 2003), and provokes theories about power and societal gender roles (e.g., Carli, 1999; Carli & Eagly, 2001; Haines & Kray, 2005).

Participants bring certain mindsets, beliefs, past experiences, and schemas into the room with them. We think that the gendered life experiences of the participants may have influenced how they were affected by the power mindset prime and also how they responded to the situation with the spilled pencils because there was no effect found when gender was not included. Based on the greater lack of societal access to power for women (Carli & Eagly, 2001) and the gendered associations of power with masculinity (Haines & Kray, 2005), it is possible that women came into the experiment with more of an association with low power and men came into the experiment with more of an association with high power. This means that participants already had a pre-existing association with power, based on societal access to power and gender role expectations, and the power mindset prime either confirmed this association or created dissonance (Kray, Thompson, & Galinsky, 2001).

It is this dissonance that we think created more action-taking with the pencils and, thereby, more helping in the situation. That is, when the experience recalled and written about in the power prime confirmed participants’ pre-existing associations with power, there was little to no action-taking, and thereby little to no helping, in the spilled pencil situation. However, when the experience recalled and written about in the power prime was dissonant with participants’ pre-existing associations with power, there was a great deal of action-taking (helping) in the spilled pencils situation. Based on the difference in access and association to power by gender, we think that the dissonance led to

**FIGURE 1**

Mean Number of Pencils Picked up When Each Researcher was the Pencil-Dropper

<table>
<thead>
<tr>
<th></th>
<th>Low Power</th>
<th>High Power</th>
</tr>
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<tbody>
<tr>
<td>Researcher A</td>
<td>3.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Researcher B</td>
<td>2.4</td>
<td>0.4</td>
</tr>
</tbody>
</table>
action-taking in different ways for men and women. For women in the high power condition, it is possible that the dissonance between a pre-existing association with low power and the mindset of high power led to the positive empowerment to take action. For men in the low power condition, it is possible that the dissonance between a pre-existing association with high power (importantly tied to cultural understandings of masculinity) and the mindset of low power led to reactance (Kray et al., 2001). This implicit experience of having power taken away, in a sense, may have led to reactionary action-taking.

The relationship between gender and power was only significant when one, but not the other, researcher was playing the pencil-dropper. We attribute this finding to researcher variability. Upon reviewing notes when Researcher A and Researcher B were each the pencil-dropper, there appeared to be inconsistencies in the pencil drop. When Researcher A was the pencil-dropper, there was more variability in the location of the drop. However, when Researcher B dropped the pencils, the location of the drop was consistent. Researcher B always dropped the pencils close to the participant, approximately within two feet, and parallel yet slightly in front of the participant next to the table on which the participant was working. However, when Researcher A dropped the pencils, the drop was not as consistently in this ideal drop area but rather slightly behind the participant and slightly out of the participant’s line of sight. We believe that when the pencil drop did not occur in the ideal area, the participants might have felt less compelled to help because the drop did not occur within their immediate vicinity. We also believe that the participant may have been less aware of the pencil drop when it occurred out of their visual field. In future research, additional videotaped practice could help reduce any pencil-dropping variability, as well as assess any other experimenter behaviors that could affect participants’ responses. It was when the pencils were spilled in the ideal drop area that we saw the significant effect of power and gender on the pencil helping variable.

Beyond issues of low power, a possible explanation for the lack of significant results for the charity donation measure is the reduced effect of the power prime over time. The opportunity to donate came much later than the opportunity to help with the pencils, and thus, the effect of the mindset prime might have dissipated by the end of the experiment. The length of time was especially long for those participants who slowly completed the filler task. We did not hurry participants nor measure the amount of time spent on the filler task; thus further exploration of this explanation is not possible. Another possible explanation is the money given to pay participants. Participants were paid in quarters to allow for a continuous measure of helping. Many participants commented that the $2 in quarters would be useful laundry money. It might be that the form of payment in quarters had an unintended effect on whether participants decided to donate, given that the sample consisted entirely of college students for whom quarters might have held value as the currency needed for washing clothes at laundry facilities. Additionally, it is very possible that the presence of the money itself acted as a secondary prime that offset the power mindset prime. Vohs et al. (2006) showed that priming participants with money reduced helpfulness.

Limitations and Future Research
A limitation of this study was the small sample size and the resultant lack of power. The current study included 57 participants, randomly assigned to high and low power conditions. This small sample did not allow for the inclusion of a control group that would have provided us with more confidence in our explanation of the power experience in men and women. More participants may also have led to more men in each condition. Our sample had few men, making men’s means less reliable. Although the smaller proportion of men in the sample follows the gender ratio of 1 to 4 for men and women in the university’s psychology program from which many participants were recruited, our future research efforts should attempt to oversample men.

Further research also should examine the effect of in-group versus out-group helping in relation to gender. Participants in this study may have been more or less inclined to help based on their own gender, as well as the gender of the pencil-dropper. For example, Stürmer, Snyder, and Omoto (2005) found that volunteers helping in-group members were more affected by empathy, but volunteers helping out-group members were impacted by interpersonal attraction. Additionally, Bilewicz (2009) found that a person may be more likely to help a member of the out-group if he or she takes on the perspective of that person. Future research should, therefore, use combinations of male and female experimenters and pencil-droppers to reflect men’s and women’s out-groups. Additional
information could also be gained about power relations to others by using various combinations of gender and ethnicity of experimenters and pencil-droppers.

Conclusions
In this study, there was a difference in the way that men and women experienced and were affected by power. Women who thought of an empowering time from their past were more helpful than men reflecting on such a time, whereas men who thought of a time in which they did not have power were more helpful than women remembering such an experience. In other words, women helped more when they were empowered, whereas men helped more when they were not.

If power can impact women’s and men’s helping behavior in different ways, it is important to consider how positions and situations of power could affect men’s and women’s behavior in educational, governmental, and social service settings. Redistributing power among men and women may have the potential to increase prosocial behavior within society.

References


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