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Pers Soc Psychol Bull 2011 37: 1312 originally published online 6 June 2011

DOI: 10.1177/0146167211410439

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Stereotype Threat and Female Communication Styles

Courtney von Hippel¹, Cindy Wiryakusuma²,
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Personality and Social Psychology Bulletin
37(10) 1312–1324
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DOI: 10.1177/0146167211410439
http://pspb.sagepub.com



Abstract

A large body of research has documented the performance-debilitating effects of stereotype threat for individuals, but there is a paucity of research exploring interpersonal consequences of stereotype threat. Two experiments tested the hypothesis that stereotype threat would change the style in which women communicate. Results indicate that women who experience stereotype threat regarding leadership abilities react against the stereotype by adopting a more masculine communication style. Study 2 provides evidence that self-affirmation eliminates this effect of stereotype threat on women's communication styles. A third study demonstrates an ironic consequence of this effect of stereotype threat on women's communication—when women under stereotype threat adopt a more masculine communication style, they are rated as less warm and likeable, and evaluators indicate less willingness to comply with their requests. Theoretical and practical implications of these findings are discussed.

Keywords

stereotype threat, social identity threat, communication, leadership, self-affirmation

Received December 8, 2010; revision accepted March 18, 2011

Any individual can experience stereotype threat, or the psychological threat of confirming or being reduced to a negative stereotype (Steele, 1997). This threat can result in performance deficits when people attempt difficult tasks in domains in which they are negatively stereotyped. The debilitating effects of stereotype threat on performance are robust. Beyond the typical academic domains where performance deficits have been widely demonstrated (e.g., Spencer, Steele, & Quinn, 1999; Steele & Aronson, 1995), stereotype threat can also disrupt performance in activities as diverse as White men engaging in athletics (Stone, Lynch, Sjomeling, & Darley, 1999) and women driving (Yeung & von Hippel, 2008).

In the current article we explore a different type of consequence of stereotype threat. The extant research has largely focused on *intrapersonal* consequences of stereotype threat. In the prototypic study participants are reminded of a demeaning stereotype about their upcoming performance, with the result that they show decreased working memory (Croizet et al., 2004; Schmader & Johns, 2003), increased stress (Blascovich, Spencer, Quinn, & Steele, 2001) and anxiety (Bosson, Haymovitz, & Pinel, 2004; Inzlicht & Ben-Zeev, 2003), and consequently decreased performance. Sometimes the reminder is communicated socially or via subtle cues (e.g., Davies, Spencer, Quinn, & Gerhardstein, 2002; Murphy, Steele, & Gross, 2007), although often the stereotype is simply declared to be relevant. The goal of the current research

is to examine *interpersonal* consequences of stereotype threat by considering the effect of stereotype threat on communication.

To date there has been some evidence that stereotype threat can affect interpersonal processes. Most notably, in a series of negotiation studies Kray and her colleagues demonstrated that negotiators change their tactics at the bargaining table when they experience stereotype threat (Kray, Galinsky, & Thompson, 2002; Kray, Reb, Galinsky, Thompson, 2004; Kray, Thompson, & Galinsky, 2001). The bottom line from these studies is that when women feel that they have been explicitly stereotyped as poor negotiators they open the negotiation with more extreme offers. This strategy results in greater negotiation success for these women, as their partners responded to these extreme offers by giving more ground to reach a consensus. Recent work also suggests that stereotype threat can influence nonverbal processes, as White participants who were threatened by the stereotype that they were racist put a greater distance between themselves and a

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Black participant as they prepared for an interaction on a racially sensitive topic (Goff, Steele, & Davies, 2008). The goal of the current article is to extend this research on interpersonal consequences of stereotype threat by measuring how stereotype threat affects the manner in which people use language.

If stereotype threat influences language use, the possibility emerges that the effects of stereotype threat might reverberate throughout social systems, leading to outcomes that extend beyond the immediate targets of stereotypes. That is, if people speak differently as a consequence of feeling stereotyped, the differences in the way they use language could influence those who stereotyped them, and presumably others who did not stereotype them but were party to later interactions. These altered communications could then have a variety of consequences for everyone involved. After all, language is the primary medium for the transmission of information between individuals and groups, and the content and form of what is communicated have wide-ranging effects (Conway & Schaller, 2007; Fiedler, 2008; Lyons & Kashima, 2003; Wigboldus, Semin, & Spears, 2000). The current study begins to address the impact of stereotype threat on language use by observing how the speaking styles of women change when they are threatened by the stereotype that men are better leaders.

Communication and Leadership

Men and women tend to employ different communication styles (Crawford, 1995; Mulac, Bradac, & Gibbons, 2001; Mulac, Incontro, & James, 1985). Feminine communication is more indirect, elaborate, and emotional, whereas masculine communication is more direct, succinct, and instrumental (Mulac et al., 2001; Popp, Donovan, Crawford, Marsh, & Peele, 2003). The feminine linguistic style can help establish rapport and encourage the speaking partner to respond, but it can also reflect uncertainty, tentativeness, and a lack of authority (Aries, 2006; Case, 1994; Lindsey & Zakahi, 2006). One domain in which this perceived tentativeness and lack of authority is likely to have major consequences for female speakers is the workplace, where leadership and agency are highly valued.

Stereotypically masculine characteristics (such as assertiveness and self-reliance) are often seen as prerequisites for effective leadership (e.g., Powell, Butterfield, & Parent, 2002; Schein, 1975). As a consequence, women are often considered less competent than men in leadership roles (Eagly & Karau, 2002; Heilman, Wallen, Fuchs, & Tamkins, 2004) and are rated less favorably when applying for these positions (Etaugh & Riley, 1983; Heilman, 2001). Thus, women's competence in leadership is often undervalued, in part because of gender-based stereotypes (Eagly & Karau, 2002; Heilman, 2001).

The prevalence of gender-based stereotypes in the leadership domain may place females in situations where they risk

fulfilling, or being judged in light of, these negative stereotypes. Thus, women in or aspiring to leadership positions may be vulnerable to stereotype threat. Consistent with this possibility, descriptions of a leadership position that contained stereotypically masculine traits negatively affected females' performance on a managerial task, but not descriptions that contained stereotypically feminine traits (Bergeron, Block, & Echtenkamp, 2006). Because female leaders are not considered to be as effective communicators as male leaders (Claes, 1999; Still, 2006), women's communication style may reinforce the stereotype that they are less competent than men in a leadership position. The current study examines whether stereotype threat influences the communication style of females when a masculine stereotype of leadership is made salient.

Stereotype Threat and Stereotype Reactance

Stereotype threat typically leads to performance decrements in stereotype-relevant domains (e.g., Spencer et al., 1999; Steele, 1997). Under certain circumstances, however, stigmatized individuals can behave in a manner that opposes the activated stereotype through a process known as stereotype reactance (Kray et al., 2001). Stereotype reactance can occur when individuals possess sufficient resources to alter their behavior and react against a negative stereotype. For example, Kray et al. (2001) found that female participants reacted against the stereotype that women perform poorly in negotiation tasks by engaging in counterstereotypical behavior. As a consequence, stereotype threat led them to outperform male participants at the bargaining table.

It is important to note, however, that stereotype threat will not lead to reactance on all tasks because individuals are often limited in their ability to successfully react against the threat (Kray et al., 2001). For example, reactance effects have not been found in mathematics because of the fact that math ability is less malleable than negotiation style (Schmader & Johns, 2003). Despite the fact that communication styles are often outside of conscious control (e.g., von Hippel, Sekaquaptewa, & Vargas, 1997), the manner in which people communicate is adaptable (e.g., Hannah & Murachver, 1999, 2007) and sensitive to people's goals (e.g., Semin & De Poot, 1997). Thus, women may react against a negative stereotype of female leadership by altering their communication style to conform to a more masculine norm.

The goal of Experiment 1 was to examine whether the communication styles of women change when they are reminded that effective leadership is linked to stereotypically masculine qualities. One possibility is that women will react against the stereotype by adopting a more masculine communication style. In contrast, women may show typical stereotype threat effects by becoming more feminine in their communication style. Although both of these possibilities are consistent with previous literature, reactance may be the more likely outcome. As noted above, communication styles

are more adaptable than intellectual tasks, and thus should be amenable to reactance. This possibility is also consistent with evidence that people attempt to deny the veracity and/or self-relevance of the stereotype when confronted with stereotype threat (von Hippel, von Hippel, Conway, Schooler, & Radvansky, 2005).

Study 1

Method: Participants

A total of 100 female students from a first-year psychology course received credit for participation in the study. Participants were aged between 16 and 54 years, with a mean age of 20.18 years ($SD = 4.80$).

Materials

Stereotype threat article. Participants in the stereotype threat condition received a fictitious article designed to imitate the university business school's magazine. Following Kray et al. (2001), the article discussed the association between stereotypically masculine characteristics and effective leadership and the link to gender differences. The article informed participants,

It is the people who are willing to take a stand, and also display direct and assertive qualities, who constitute good leaders. Because males are more likely to display these traits, male and female graduates differ in their potential as leaders.

To ensure that participants were changing their communication style in response to stereotype threat and were not simply engaging in the leadership behaviors they were told are characteristic of good leaders, we also included a priming control condition. Participants in this condition read the same article as participants in the stereotype threat condition, with the exception that the sentence referring to explicit gender differences was removed. If participants are reacting to stereotype threat, their communication style should change in the stereotype threat condition but not in the priming control condition. An additional control condition was also included in which participants did not receive an article.

Verbal response scenarios. Participants were given a booklet containing five scenarios that were described as "issues you might encounter in your day-to-day role as a manager." The scenarios described leader-subordinate, leader-peer, and leader-superior situations based on organizational psychology exercises from Moberg and Caldwell (1988). For example, one scenario described a situation that prompted the participant to delegate extra work to a subordinate:

A new work assignment has been given to your department to complete. The assignment is tedious

and you are not sure who to give it to. You decide to pass it onto Ben, and stop by his desk to give him the new assignment.

Think about how you would approach this subordinate. Once you have gathered your thoughts, please speak into the recorder to indicate how you would give this assignment to your subordinate (in other words pretend that you are talking to your subordinate).

Communication style measure. Communication style was measured by the presence of specific linguistic features that are more commonly used by women than men—hedges, hesitations, tag questions, and verbosity (Mulac, 2006; Mulac et al., 2001; Philips, 1980). Women use these linguistic features to invite and encourage participation from the speaking partner; however, they can signal tentativeness and uncertainty in women's speech. Participants' verbal responses were coded for each linguistic feature in accordance with the following operational definitions:

- i. **Hedges:** Hedges involve words or phrases that reduce the strength of assertion of a given statement and have no instrumental value to the message itself. For example, "*I was just wondering* if you could . . ." (Philips, 1980). Although hedges can soften a statement, they also convey tentativeness, hesitation, and uncertainty (Areni & Sparks, 2005; Lakoff, 1975).
- ii. **Hesitations:** Hesitations do not communicate information to the listener and include filled pauses such as "um" and "uh," or unfilled pauses. Although hesitations are often used by women to facilitate turn taking in a conversation, they can also signal tentativeness, anxiety, and uncertainty (Mulac, Seibold, & Farris, 2000; Philips, 1980).
- iii. **Tag questions:** Tag questions are shortened questions added to the end of a declarative statement, for example, "It's cold in here, *isn't it?*" Tag questions are used to soften a statement and to invite the listener to confirm or expand on the message, yet they also suggest doubt or a lack of confidence (Lakoff, 1975; Philips, 1980).
- iv. **Verbosity and directness:** Verbosity is associated with a less direct response. Verbosity was measured by counting the number of words the participant used in responding to each scenario. Ratings for perceived directness were made by two raters blind to hypotheses on a 3-point scale ranging from 1 (*not at all direct*) to 3 (*very direct*).

Procedure

Female participants from a first-year psychology course were invited to sign up for a study about "Personality and

Communication” through an online booking program. All participants were greeted by a female experimenter and given a consent form to read and sign. Next, participants were given a brief introduction to the experiment. In line with past research, women in the no threat condition were informed that “the study was examining communication styles in a workplace setting in order to develop a better understanding of the different styles used to communicate in work situations.” In the threat and priming control conditions, the experimenter informed participants that “the study was examining communication styles of women in a leadership context.” Participants in these two conditions then received the brief article that served as the stereotype threat or priming control manipulation.

After this introduction to the experiment, participants were presented with the verbal response scenarios. The experimenter explained to participants that they should assume the role of a marketing manager when responding to each scenario. Participants were given time to carefully read through the description of the marketing manager role. Participants were asked to respond to the scenarios in the same order as they were presented in the booklet and to ensure they responded to each scenario before moving on to the next. The instructions for each scenario reminded participants to pretend they were actually speaking to their colleague. Each participant was shown how to record her oral responses using a handheld recorder and was then left alone in the room during the recording period. At the conclusion of the task, participants completed some demographic questions before they were debriefed. To negate any possible effects from the stereotype threat and priming control manipulations, participants in these conditions were told that both masculine and feminine characteristics describe successful leaders and were directed toward relevant research (e.g., Eagly & Carli, 2003).

Results

Analysis. Verbal responses were transcribed, and two raters, blind to hypotheses, recorded the frequency of tag questions, hesitations, and hedges for each role-play scenario. Raters also provided an overall directness rating on a 3-point scale. Verbosity was determined by counting the number of words used. Raters’ judgments showed acceptable levels of interrater reliability with Pearson’s correlations of $r = .65$ for tag questions and $r = .72$ for directness. As in previous research (Schacter, Christenfeld, Ravina, & Bilous, 1991), interrater reliability was very high for both hesitations ($r = .99$) and hedges ($r = .96$) because of the simplicity of observations. An average of the raters’ judgments was computed for each of the linguistic features.

Cronbach’s alphas were calculated for each communication style variable across the five verbal responses. Reliability was found to be acceptable for hedges ($\alpha = .75$), hesitations ($\alpha = .86$), verbosity ($\alpha = .85$), tag questions ($\alpha = .75$), and

perceived directness ($\alpha = .70$). These linguistic features were positively correlated with one another and negatively correlated with ratings of perceived directness. Therefore, the rates of the different linguistic features were standardized and collapsed to create an overall communication style variable. This variable reflected a combination of hedges, hesitations, tag questions, verbosity, and perceived directness (reverse coded), with higher scores indicating a more feminine and less direct communication style ($\alpha = .73$). The order of presentation of the five scenarios was counterbalanced, and an analysis of variance (ANOVA) revealed no main effects or interactions with order ($F_s < 1$; *ns*).

Stereotype threat and communication. To test the hypothesis that communication varies as a function of stereotype threat, a one-way ANOVA was performed. Results indicated that communication style varied as a function of condition, $F(2, 97) = 3.27, p < .05, \eta^2 = .06$. Simple effects analyses revealed that women in the stereotype threat condition adopted a more masculine style of communication ($M = -0.18, SD = .50$) compared to women in the priming control condition ($M = 0.11, SD = 0.60$) and the no article control condition ($M = 0.08, SD = 0.41$), $F(1, 65) = 4.64, p < .05, \eta^2 = .07$, and $F(1, 64) = 5.28, p < .05, \eta^2 = .08$, respectively. In contrast, participants in the no article control and priming control conditions did not differ in their communication styles, $F(1, 65) = .06, p > .80$.

For example, when delegating tedious work to a subordinate, a participant in the stereotype threat condition said, “Hi Ben I was just wondering if you could do this assignment for me, be very much appreciated, thank you.” Participants in the control condition used a less direct style of communicating, for example,

Hi Ben, how are you, um I’ve just received this from Wayne the manager of another department store, and he’s actually assigned us a new type of work that we should be doing today and it’s quite a hard task and um, I know you’ve got great capabilities and stuff like that so . . . would you be interested in taking the role of this job and you can get as much help as you need for this job, you can come to me or anyone else. I’d like you to have a go at this job, it’d be good experience and stuff like that, I think you’d be really good at it, and um, . . . yeah so if you have any queries and stuff like that, or you don’t want really want to take on the job or stuff like that, you might want to come to me and talk to me about it, but I think it’d be a really good opportunity for you and um, yeah.

Discussion

Study 1 highlights the influence of stereotype threat on interpersonal communication. When explicitly reminded of a masculine stereotype of leadership and associated gender differences, participants responded by adopting a more

masculine communication style. Thus, participants reacted against the stereotype and spoke in a more direct fashion with fewer hedges, hesitations, and tag questions. This effect did not emerge when participants were told that specific masculine traits are associated with good leadership abilities but were not told of the gender association with these traits. Thus, it seems unlikely that women in the stereotype threat condition adopted a more masculine style of communication because they were trying to be good leaders and simply doing what they were told good leaders do. Nevertheless, to provide further evidence that stereotype threat rather than some aspect of the information was the cause of the findings that emerged, Study 2 relied on a different sort of control condition.

Study 2

Self-affirmation theory proposes that one of our primary social motivations is to achieve and maintain a sense of integrity and self-worth (Sherman & Cohen, 2006; Steele, 1988; Steele & Liu, 1983). According to self-affirmation theory, individuals can overcome threats to their integrity by affirming other positive aspects of their self (Sherman & Cohen, 2006). Stereotype threat is a threat to self-integrity, and research has demonstrated that allowing threatened individuals to affirm alternative self-resources (e.g., encouraging them to think about a characteristic, skill, value, or role they view as important) can reduce the impact of stereotype threat (Cohen, Garcia, Apfel, & Master, 2006; Cohen, Garcia, Purdie-Vaughns, Apfel, & Brzustoski, 2009; Martens, Johns, Greenberg, & Schimel, 2006). As a result, the performance decrements associated with stereotype threat can be attenuated.

Experiment 2 was designed to assess whether the reactance displayed by women in Experiment 1 was the result of motivational consequences of stereotype threat. If the findings in Experiment 1 are the result of stereotype threat, self-affirmation should eliminate the reactance effect found among threatened participants. If the results from Experiment 1 are caused by other informational aspects of the information, however, then self-affirmation should not affect the communication style adopted by women in the stereotype threat condition.

Method: Participants and Design

Participants were 50 female undergraduate students who received either partial course credit or Aus\$10 (~ US\$8 at the time) compensation for their time. Participants were aged between 17 and 30 years, with a mean age of 21.38 years ($SD = 3.11$). The experiment was a 2 (stereotype threat vs. no threat) \times 2 (self-affirmation vs. no affirmation) between-subjects factorial design with female participants randomly assigned to one of the four experimental conditions.

Materials

Stereotype threat. Participants in the stereotype threat condition received the same fictitious article from Experiment 1 designed to elicit feelings of stereotype threat. Participants in the control condition did not receive an article.

Self-affirmation exercise. The self-affirmation manipulation was adapted from previous research in which participants are asked to write about why a central value may be important to themselves versus others (e.g., Cohen et al., 2006; Martens et al., 2006). Participants in all conditions received a list of 11 values. The items included characteristics such as relationships with friends and family, athletic ability, musical ability/appreciation, and sense of humor. In the affirmation condition, participants were asked to indicate the value *most* important to them, to describe why it was important to them *personally*, and to relate an event when it had been particularly important. Participants in the no affirmation condition were asked to indicate their *least* important value, to write about why it may be important to *another* person, and to describe a time when it may be particularly important to that other person.

Verbal response scenarios. The scenarios were the same as those used in Experiment 1 and were counterbalanced to control for possible order effects.

Manipulation check. To assess the effectiveness of the stereotype threat manipulation, participants were asked to rate the extent to which “males are more likely to possess the same traits as effective leaders.” Responses were measured using a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Communication style measure. Communication style was measured using the same linguistic features used in Experiment 1.

Procedure

Participants signed up to the experiment through an online research participation program. A female experimenter greeted each participant on arrival and gave her an information sheet that outlined the experimental procedure. Participants were given a brief introduction to the experiment that mirrored the introduction used in Experiment 1. Women in the stereotype threat condition received the same article from Experiment 1 to induce stereotype threat, whereas women in the no threat condition did not receive an article. Participants were then given a short writing task that functioned as the self-affirmation manipulation. Women in the affirmation condition were introduced to the task as an exercise to “determine what you, as a university student, value most at this stage of your life.” In the no affirmation condition, the task was described as an exercise to “determine what values university students might hold.” Participants spent 8 minutes completing the self-affirmation exercise.

Once participants finished writing, they moved on to the verbal response scenarios, which were identical to those used in Experiment 1.

Results

Analyses. Each participant recorded verbal responses to five workplace scenarios.¹ Responses for each scenario were transcribed to assist in the coding of hedges and hesitations and to determine the number of words used per response (verbosity). Because of the high correlation between raters in Experiment 1 for hesitations and hedges ($r = .99$ and $r = .96$, respectively), only one rater was used to code for these linguistic features. Because of the subjective nature of the perceived directness variable, however, two independent raters blind to the experimental conditions evaluated the perceived directness of each response. These judgments showed considerable interrater reliability with a Pearson's correlation of $r = .89$. After transcribing and coding the data it was found that only one participant used a tag question. Therefore, this variable was excluded from all subsequent analyses. As in Experiment 1, the order of presentation of the five scenarios was counterbalanced, and an ANOVA showed that responses did not systematically vary as a function of order ($F_s < .25$, $p_s > .61$).

Cronbach's alpha was calculated for each communication style variable across the five verbal responses. Reliability was found to be acceptable for hedges ($\alpha = .68$), hesitations ($\alpha = .89$), verbosity ($\alpha = .89$), and perceived directness ($\alpha = .84$). As in Experiment 1, these linguistic features were positively correlated with one another and negatively correlated with ratings of perceived directness. Therefore, the dependent variables were standardized and averaged together to create an overall communication style variable ($\alpha = .83$). As in Experiment 1, higher scores indicate a more feminine and less direct communication style.

Manipulation check. Participants who received the stereotype threat article were more likely to report that masculine characteristics were associated with successful leaders ($M = 4.08$, $SD = 0.28$) than those who did not receive the stereotype threat article ($M = 1.64$, $SD = 0.62$), $F(1, 48) = 301.16$, $p < .001$, partial $\eta^2 = .86$.

Effect of stereotype threat and self-affirmation on communication style. To investigate the hypotheses about stereotype threat and self-affirmation, a focused contrast analysis was conducted (Judd, McClelland, & Culhane, 1995). A contrast was created that described the hypothesized rank order of means of the dependent variables. This contrast was derived from the hypothesis that stereotype threat would lead to reactance in communication styles and that self-affirmation would buffer the effect of stereotype threat. The comparison of interest was thus between threatened participants who did not self-affirm and participants across the other three conditions. Therefore, the threat/no affirmation condition was assigned a weight of -3 and compared to the other three

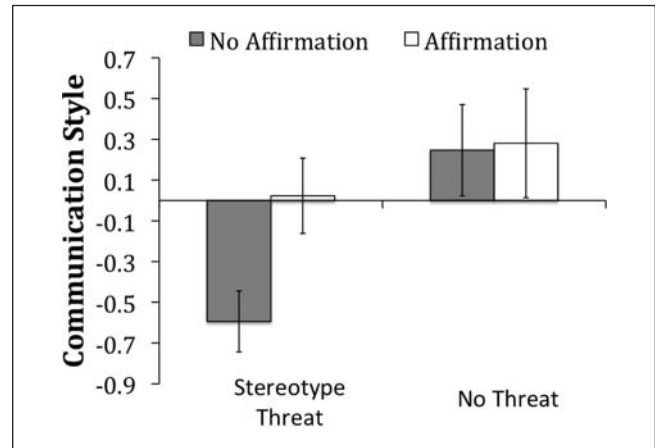


Figure 1. Standardized communication style in response to stereotype threat and self-affirmation conditions. Higher numbers represent more feminine communication styles. Error bars represent standard errors.

conditions (threat/affirmation, no threat/no affirmation, and no threat/affirmation), which were each weighted with +1.

The contrast between experimental groups with overall communication style as the dependent variable was consistent with hypotheses, $F(1, 46) = 9.62$, $p < .01$, partial $\eta^2 = .17$. As can be seen in Figure 1, participants in the threat/no affirmation condition obtained a lower score on the overall communication style variable ($M = -0.59$, $SD = 0.52$) compared to participants in the threat/affirmation ($M = 0.03$, $SD = 0.64$), no threat/no affirmation ($M = 0.25$, $SD = 0.81$), and no threat/affirmation ($M = 0.28$, $SD = 0.96$) conditions. These results indicate that threatened participants who did not self-affirm reacted against the masculine leadership stereotype by using a more masculine and direct communication style compared to participants in the other three conditions.

Discussion

Study 2 replicated the finding that stereotype threat causes women to react against the leadership stereotype by adopting a more masculine communication style compared to women in the control condition. Study 2 also demonstrated that self-affirmation eliminated this effect, presumably by reducing the psychological threat posed by the stereotype (e.g., Martens et al., 2006). Nevertheless, although Studies 1 and 2 provide evidence for the impact of stereotype threat on women's communication styles, these studies do not examine how others respond to this change in communication. The goal of Study 3 was to examine whether perceived competence and likeability, and motivation to comply with requests, differ as a function of communication style and gender.

Study 3

It may seem intuitive that a direct and assertive communication style—such as the one women adopted when they

experienced stereotype threat—would be desirable for female employees. Yet research has demonstrated that women who adopt masculine tendencies often face repercussions for violating prescriptive gender norms (Heilman et al., 2004). Inherent in the gender stereotypic prescriptions of how men and women should behave are expectations of how members of each gender should *not* behave. The stereotype that women should display communal and warm behaviors also specifies that women should not show agentic qualities, such as assertiveness, independence, or dominance (Heilman, 2001; Liberman, 2007). Women engaging in counterstereotypic behaviors are often perceived as more competent than stereotypically feminine women, but they are also subject to social penalties (Heilman, 2001). For example, Heilman and colleagues have consistently shown that women, but not men, who are portrayed as highly successful in masculine-typed roles are perceived to have violated gender role expectations. These women are described as lacking the communal qualities prescribed for women, are liked less than their male counterparts, and are less preferred as bosses (Heilman et al., 2004; Heilman & Okimoto, 2007). Thus, women who are seen as competent in leadership are often disliked and penalized through social rejection (Heilman, 2001). Women who assume a masculine communication style are also rated as more threatening and less persuasive and influential compared to men or to women who use a traditionally feminine communication style (Buttner & McEnally, 1996; Carli, 1990, 1995). Therefore, women who react to gender-based stereotypes of leadership by adopting a more masculine communication style run the risk of being less effective interpersonally, less likeable, and less likely to exert influence. This possibility is examined in Study 3.

Method: Participants and Design

A total of 96 university students (48 male and 48 female) were compensated Aus\$5 for their participation in this study. Participants were between 17 and 34 years old, with a mean age of 20.73 years ($SD = 2.85$).

The current study was a 2 (participant gender) \times 2 (gender of manager) \times 2 (communication style: masculine or feminine) mixed model design, with gender of manager and communication style as within-subjects factors. Participants in the current study were presented with four of the situations from Studies 1 and 2. After reading about each situation, participants read a transcript of a request that a “manager” made in response to that situation. Participants read the responses of four different managers in total (two male and two female). The responses that were selected for use in this study were from participants in Study 2. Half of the responses selected were from women who had been threatened with the idea that men are preferred as leaders (stereotype threat condition), and half were from women who had not been threatened with this idea (control condition). In total, eight responses

were chosen (i.e., one response was chosen from a participant from the threat condition, and one response was chosen from the control condition for each workplace situation).

To select appropriate prototypic responses from each of the conditions in Study 2, a number of criteria were applied. First, responses selected for each workplace situation and condition had to be within 10 words of the median word count for that condition and particular scenario. Second, the eight responses ultimately selected were required to be from eight different participants in the original study to ensure that effects were not being driven by the communication style of a particular individual. Finally, responses were also selected to be as close as possible to the mean for the various linguistic markers in the two conditions. Thus, responses from the stereotype threat condition were rated as more direct, and contained fewer hesitations and hedges, compared to responses from the control condition, but the magnitude of this difference mirrored the results of Studies 1 and 2.

Manager gender was manipulated through unambiguous male and female names (Katie, Susan, Jack, and Ben), and these names were bolded whenever they appeared. The managers’ names and gender pronouns were manipulated depending on counterbalancing and all other information was identical. In summary, all participants read about four workplace scenarios and read requests made in response to these scenarios from four managers. Two of the requests were from speakers using a feminine communication style (from the control condition of Study 2), and two were from speakers using a masculine communication style (from the stereotype threat/no affirmation condition of Study 2). The particular requests that participants received after each workplace scenario, as well as the gender of the manager delivering the requests, were counterbalanced such that all combinations of communication style and gender were accounted for. To control for potential order effects, the presentation order of the workplace situations within each counterbalancing condition followed a Latin square design.

Measures

Competence and warmth. To measure competence and warmth we used a modified version of the competence and warmth scale first developed by Fiske, Xu, and Cuddy (1999) and applied to gender stereotypes in Eckes (2002). Competence was assessed using the words *competent*, *competitive*, and *confident* ($\alpha = .69$). Warmth was assessed using the words *warm* and *likeable* ($\alpha = .84$). Participants responded to the statements, such as “This manager is competent” and “This manager is likeable,” using a 5-point scale anchored by *strongly disagree* and *strongly agree*.

Request compliance. One item was used to assess the behavioral intention of participants in response to the request they had read: “I would gladly comply with this request.” Compliance in the workplace is important (Rahim & Afza, 1993), as a manager is unable to effectively lead and facilitate

Table 1. Study 3 Means, Standard Deviations, and Intercorrelations Among Variables

Variable	M	SD	1	2	3
1. Warmth scale	3.33	0.40	(.84)		
2. Competence scale	3.39	0.42	.44*	(.69)	
3. Willingness to comply	3.50	0.44	.36*	.57*	(—)

N = 96. Scale reliabilities are listed on the diagonal.
*p < .01.

task completion if workers are unwilling to comply. This item was rated using a 5-point scale anchored by *strongly disagree* and *strongly agree*.

Procedure

Female and male participants were approached on campus by a female experimenter and asked if they would like to participate in a short study for Aus\$5. Participants were told that the study was examining the evaluation of workplace communication styles. They were then presented with the study booklet, with an instruction sheet on the front. This instruction sheet informed them that they would be reading about four situations faced by four managers and that after each situation they would read how the manager in that situation responded. Participants were informed that they were reading transcripts of actual responses and told to imagine that the manager was directing the request toward them as an employee at that organization. They were also informed that they would be asked to answer questions about each manager after reading the transcript of the request that he or she made.

Participants were then left to complete the survey independently, but the experimenter remained nearby to answer questions. Participants read the first workplace scenario followed by, “during this conversation, (**Jack/Susan**) said to you . . .” at which point the request transcripts were inserted. For each scenario, participants read the transcript of either a male or female manager’s response, depending on the relevant counterbalancing condition. This process was the same for all four workplace scenarios. After reading and answering questions relating to the four managers, participants answered demographic questions and were then thanked and debriefed.

Results

Table 1 presents the means, standard deviations, and intercorrelations of the dependent measures.

Participant gender. To assess whether communication style, manager gender, and participant gender affected evaluations of managers, ratings were collapsed across the four scenarios. To determine if participant gender influenced ratings, all analyses were initially conducted using a 2 (participant gender) × 2 (manager gender) × 2 (communication style) mixed

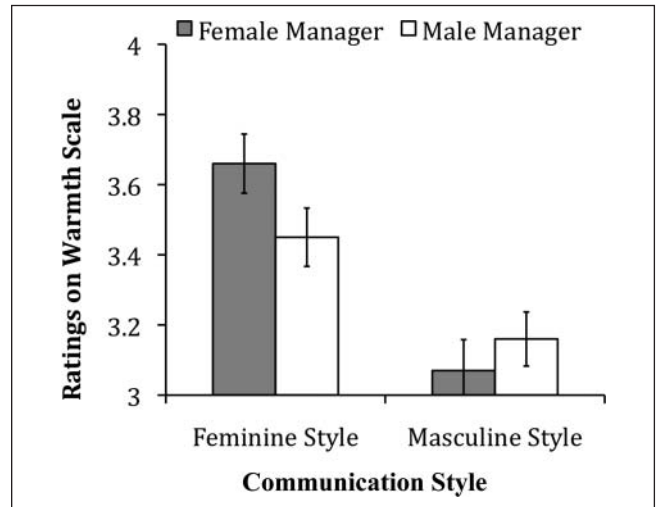


Figure 2. Perceived warmth as a function of communication style
Error bars represent standard errors.

model ANOVA, with participant gender as the between-subjects factor and manager gender and communication style as the within-subjects factors. No significant main effects of participant gender and no significant interaction among participant gender, manager gender, and communication style emerged, all *F*s ≤ 1.03, *p*s > .30. For this reason, ratings from male and female participants were collapsed for all subsequent analyses.

Warmth scale. To assess whether female managers who used a masculine communication style would be perceived as less warm, a 2 (manager gender) × 2 (communication style) ANOVA was conducted on the warmth scale. Results revealed a main effect of communication style, whereby managers who adopted a masculine communication style were rated as significantly less warm than managers who used a feminine communication style, *F*(1, 95) = 24.85, *p* < .001, partial η^2 = .21. This main effect was qualified by a significant interaction between manager gender and communication style, *F*(1, 95) = 4.06, *p* < .05, partial η^2 = .04. As can be seen in Figure 2, managers who adopted a masculine style of communication were rated as less warm than managers who used a feminine style of communication, but this effect was more pronounced for female managers, *F*(1, 95) = 25.19, *p* < .001, partial η^2 = .21, than for male managers, *F*(1, 95) = 6.88, *p* = .01, partial η^2 = .07.

Competence scale. To assess whether managers who used a masculine communication style would be rated as more competent, a 2 (manager gender) × 2 (communication style) ANOVA was conducted. Results revealed no significant main effects and no significant interaction between manager gender and communication style, all *F*s ≤ 1.17, *p*s > .25. Thus, participants rated managers as similarly competent regardless of manager gender and communication style.

Request compliance. To assess whether manager gender and communication style would affect willingness to comply with

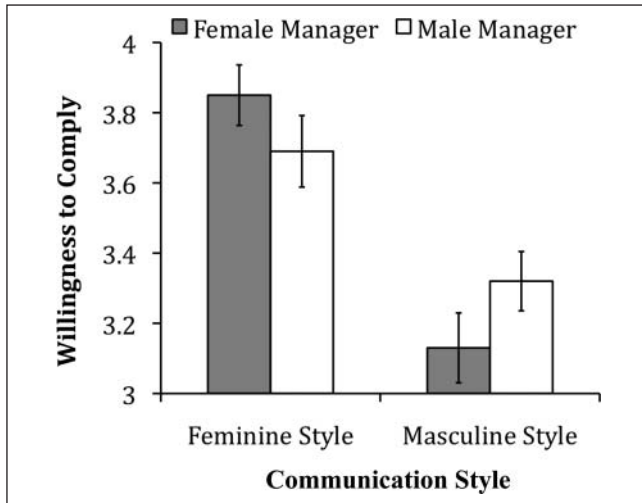


Figure 3. Willingness to comply with the request as a function of communication style
Error bars represent standard errors.

the request, a 2 (manager gender) \times 2 (communication style) ANOVA was conducted. Results revealed a significant main effect of communication style, such that participants indicated less willingness to comply with requests from managers who used a masculine communication style than with requests from managers who used a feminine communication style, $F(1, 95) = 32.46, p < .001$, partial $\eta^2 = .26$. This main effect was qualified by a significant interaction between manager gender and communication style, $F(1, 95) = 4.24, p < .05$, partial $\eta^2 = .04$. As can be seen in Figure 3, these analyses revealed that although participants were less willing to comply with both female and male managers who used a masculine style, this effect was significantly more pronounced for female managers, $F(1, 95) = 33.00, p < .001$, partial $\eta^2 = .26$, than for male managers, $F(1, 95) = 7.38, p < .01$, partial $\eta^2 = .07$.

Discussion

Research has shown that women in the workplace who violate perceived gender roles and behave in a more masculine fashion are liked less (e.g., Rudman & Glick, 2001), but no research has explored this in the context of reacting to stereotype threat. The current study assessed how female participants who adopted a masculine communication style in response to stereotype threat are evaluated. Results indicate that women who responded to stereotype threat with a masculine communication style were rated as less warm and participants were less willing to comply with their requests compared to men who made these same statements. Gender of the participant did not affect these findings.

Somewhat surprisingly, managers were rated as equally competent regardless of their gender or communication style. Based on prior research, it was expected that managers who adopted a more masculine speech style would be rated higher on competence than managers using a feminine style.

Furthermore, given research indicating that men are generally rated as more competent in leadership roles than women (e.g., Heilman et al., 2004), it was expected that male managers would be rated as more competent than female managers overall. The lack of findings for competence suggests either that the communications that were provided were too brief to influence such judgments or that the prior effects for gender and communication style are not as robust as previously assumed. Thus, it is possible that women who adopt a more masculine leadership style in an attempt to appear more competent may not even achieve this goal. Instead, women who engage in stereotype reactance may incur negative interpersonal consequences without the benefit of being considered more competent.

An important limitation of the current study is that transcripts of requests were used. As such, manager gender and manager communication style (masculine or feminine) were less salient than they might otherwise have been. When actually speaking, directness of communication, hesitations, and other linguistic markers are likely to be more natural and more discernable than they are in transcripts, and thus presumably have a greater impact. Manager gender would also be more prominent when actually listening to someone speaking. As a consequence, negative reactions to women using a direct or masculine communication style might be more pronounced if individuals were listening to managers speaking. In short, the perceived role violation may be more obvious when it is spoken rather than being read.

General Discussion

Although stereotype threat has been documented across a diverse range of groups and tasks, relatively little research has examined the impact of stereotype threat on interpersonal processes such as communication. The current experiments examined the effects of stereotype threat on women's communication style within a leadership context. Consistent with stereotype reactance (Kray et al., 2001), women threatened by the stereotype that men are better leaders adopted a more masculine communication style compared to women in the control condition (and women who were given the same trait information regarding good leaders but who were not told that these traits are linked to gender). Experiment 2 replicated this effect while also demonstrating it is moderated by motivational processes such as self-affirmation. Women who experienced stereotype threat but self-affirmed maintained a more feminine style of communication compared to women who did not self-affirm.

This research highlights the possibility of more far-reaching consequences of stereotype threat. Managing relationships and making requests are examples of everyday interactions that require strategic use of language. Although requests can vary in their content and form, most requests can be easily categorized in terms of how polite or direct the request is (Forgas, 1999). In our research, the goal of the message remained the same (i.e., all participants were making

the same requests to others within the organizational hierarchy), but the way in which these requests were made varied dramatically as a function of stereotype threat. Experiment 3 demonstrates that women who react against the stereotype by adopting a more masculine communication style are evaluated as less warm, and people are less willing to comply with their requests. Furthermore, this masculine style did not result in women being viewed as more competent, suggesting that reacting to stereotype threat in such a manner may result in social penalties with few if any gains.

This issue of penalties versus gains raises an important implication of the current findings, as they highlight that even when people are able to react against the stereotype rather than succumb to it, there may still be costs for the stereotyped individual. In Kray et al.'s (2001) research, women responded to stereotype threat by making more extreme initial offers, and as a consequence they benefited materially from the negotiation. Because Kray et al. did not ask participants what they thought of their negotiation partners, we do not know whether this material gain was accompanied by a social loss. That is, participants might have yielded more to their stereotype threatened partners but might have formed highly negative impressions of them that could conceivably have important consequences in the workplace or other settings that involve repeated interactions. By focusing on the social consequences of stereotype threat on communication style, the current study revealed a cost to stereotype threat that can emerge even when the threat of the stereotype does not bring about its own reality. The irony of the current findings is that by reacting against gender stereotypes and behaving in a stereotypically masculine fashion, women nevertheless are evaluated more negatively. These findings complement the results of traditional stereotype threat research in which targets suffer by acting stereotypically (e.g., women doing poorly on a math test) by demonstrating that targets can suffer also by acting counterstereotypically. Thus, consideration of the social consequences that accompany changes in behavior that are brought about by stereotype threat would seem to be a potentially fruitful topic for future research.

Women and Leadership

This research contributes to an understanding of some of the challenges that confront women in leadership. Although leadership is an important avenue for professional advancement, successful leaders are described predominantly by masculine characteristics (Powell et al., 2002). Thus, women must contend with gender stereotypes that portray them as lacking the very qualities commonly associated with effective leadership (Catalyst, 2005). Women's awareness of these stereotypes may be further affected by the disparity between men and women in leadership positions. It has been argued that gender stereotypes become more salient as one moves up the organizational ladder because the gender disparity in leadership positions is increasingly evident (Catalyst, 2005).

Women's underrepresentation in leadership positions may therefore serve as a chronic reminder of the stereotype that women are undervalued in the leadership domain.

Taken together, the findings from the current research suggest that stereotype threat may affect women in ways that hinder their ascent up the corporate ladder. Although the gender disparity in leadership is complex and multiply determined, research on stereotype threat may provide new methods for addressing it (Bergeron et al., 2006; Catalyst, 2007). The present research found that self-affirmation is an effective method for reducing the consequences of stereotype threat. Thus, interventions that encourage women to affirm positive aspects of their self might be applied to an organizational context to help ease the psychological threat imposed by gender-based stereotypes and the communicative consequences.

Recent research in leadership has identified a female leader advantage (Eagly & Carli, 2003). Coined transformational leadership, this style of leadership involves engaging with and inspiring subordinates to reach a higher level of motivation. Transformational leaders spend time communicating to gain subordinates' trust and confidence to encourage and develop them to their full potential. Such leaders set goals for the future and develop plans with their subordinates about how to achieve them (Eagly & Carli, 2003; Eagly, Johannesen-Schmidt, & van Engen, 2003). This style of leadership is more common among women and is positively associated with leadership effectiveness (Eagly et al., 2003; Lowe, Kroeck, & Sivasubramaniam, 1996). Future research could explore the possibility that promoting transformational leadership effectiveness and its association with the interpersonal skills of females might lead women to adopt a communication style that takes the greatest advantage of this female leadership style.

Conclusion

Although most stereotype threat research has focused on intrapersonal processes, the present research highlights the importance of examining the effect of stereotype threat on interpersonal processes as well. In two experiments, women who were threatened with the stereotype of leadership as a male domain reacted by adopting a more masculine communication style. These findings suggest that stereotype threat can alter the way that people communicate, with potential consequences for a variety of social interactions. This research also explored the practical consequences for women who react against stereotype threat, providing evidence that women who do so are perceived as less warm and that people are less willing to comply with their requests.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Note

1. Four participants did not respond to the workplace scenarios in an appropriate manner. These participants misinterpreted the scenario requirements and described what they would say or do, rather than pretending to speak to their colleague. Because these participants each responded incorrectly for only one of their five responses, only data from these incorrect responses were excluded from further analyses.

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