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Managing to clear the air: Stereotype threat, women, and leadership

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Abstract

In this article, we explore the process and implications of stereotype threat for women in leadership, broadly construed. First, we provide a brief background on the phenomenon of stereotype threat generally. Next, we explore stereotype threat for women in leadership by reviewing a model of stereotype threat in leadership contexts that includes cues to stereotype threat, consequences of stereotype threat, and moderators of stereotype threat appraisals and responses. In this review, in addition to considering research focused squarely on leadership, we include the broader categories of research examining stereotype threat effects in the workplace and in tasks and domains relevant to leadership. Finally, we examine implications for future research and explore practices to reduce the potential for negative stereotype threat effects.

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Introduction

Today, women hold a greater percentage of leadership roles in political life and the workforce than ever before both in the United States (Pew Research Center, 2015) and around the world (World Economic Forum, 2014). Nonetheless, women remain woefully underrepresented in the upper echelons of corporations and political systems (Catalyst, 2015; Center for American Women & Politics, 2015; Lawless & Fox, 2012.). The importance of promoting more women into leadership roles is greater than just fulfilling the promise of equal opportunity and making businesses, institutions, and governments more representative. Evidence is clear that fostering full participation for women is important for promoting a prosperous and civil society. Research suggests that women tend to adopt leadership styles that are particularly well suited for the complexity of contemporary organizations and can translate into enhanced institutional effectiveness (Eagly & Carli, 2003; Eagly, Gartzia, & Carli, 2014). Furthermore, women can bring unique and important perspectives and priorities that serve promote positive social outcomes and greater ethical accountability (Eagly et al., 2014). However, the realization of these potential advantages can be hampered by the disadvantage female leaders experience as the target of negative stereotype-based expectations.

Many explanations have been offered for why women have difficulty in reaching top leadership positions and chief among them is the stereotype-based lack of fit between women's characteristics, skills, and aspirations and those deemed necessary for effective leadership. Gender stereotype-based expectations not only affect who people see as "fitting" the preconceived notion of a leader, but they also affect women themselves. In this article, we focus

on the impact that these gender-based expectations can have on women in leadership. Women are often acutely aware that their treatment in leadership situations may be contingent upon their gender. Female leaders often find themselves in a double bind: highly communal women are criticized for being deficient leaders, and highly agentic women experience backlash for not being female enough (Eagly et al., 2014; Heilman, 2001; Heilman & Okimoto, 2007; Heilman, Wallen, Fuchs, & Tamkins, 2004; Rudman & Glick, 1999, 2001). In other words, in leadership situations women often experience "social identity contingencies" which "are possible judgments, stereotypes, opportunities, restrictions, and treatments that are tied to one's social identity in a given setting" (Purdie-Vaughns, Steele, Davies, Ditlmann, & Crosby, 2008, p. 615). In these situations, women may experience *stereotype threat* defined as "the concrete, real-time threat of being judged and treated poorly in settings where a negative stereotype about one's group applies" (Steele, Spencer, & Aronson, 2002. p. 385). In the domain of leadership, stereotype-based expectations of inferiority can be psychologically burdensome for women and can contribute to their underrepresentation (Eagly & Karau, 2002; Heilman, 1995).

Gender, leadership, and women's "lack of fit"

People have intuitive and preconceived notions of what it means to be a leader, termed implicit leadership theories, and people evaluate their leaders and potential leaders in reference to them (Forsyth & Nye, 2008; Kenney, Schwartz-Kenney, & Blascovich, 1996; Lord & Maher, 1991). In addition to reflecting personality traits and behaviors, these implicit leadership theories often reflect social identities associated with traditional leaders (Hoyt & Chemers, 2008). Two social identities commonly associated with elite leadership include being White and being male. These White and masculine leadership standards can result in biased perceptions and evaluations of people who do not fit the image of a leader, such as women (Eagly & Carli, 2007; Johnson,

Murphy, Zewdie & Reichard, 2008; Koenig, Eagly, Mitchell, & Ristikari, 2011; Rosette, Leonardelli, & Phillips, 2008).

The notion that women do not fit the image of a leader has been articulated in both Heilman's (1983, 2001) lack of fit model and Eagly and Karau's (2002) role congruity theory of prejudice toward female leaders. The female gender stereotype is largely incongruent with the leadership role (Eagly, 2004; Eagly & Karau, 2002; Heilman, 2001). Gender stereotypes are generalizations about the attributes of men and women that are shared in a society and include both descriptive components (i.e., describing how women and men are) and prescriptive components (i.e., prescribing how women and men should or should not be; Burgess & Borgida, 1999; Eagly & Karau, 2002; Glick & Fiske, 1999; Heilman, 2012). The particular gender stereotypes most relevant to the domain of leadership are those maintaining that "women take care" and "men take charge" (Dodge, Gilroy & Fenzel, 1995; Heilman, 2001; Hoyt, 2010). Specifically, women are associated with communal characteristics that highlight a concern for others, whereas men are viewed as possessing rationality and agentic characteristics that emphasize confidence, self-reliance, and dominance (Deaux & Kite, 1993; Eagly, Wood, & Diekman, 2000; Williams & Best, 1990). The qualities used to describe men are similar to those used to describe effective leaders resulting in men being viewed as a better "fit" with the leader role than women (Koenig et al., 2011).

These stereotype-based expectations of inferiority can be threatening to women and can contribute to the shortage of female leaders across diverse occupations (Block, Koch, Liberman, Merriweather, & Roberson, 2011) from the law (Vault/MCCA, 2013) to academic medicine (Burgess, Joseph, van Ryn, & Carnes, 2012). The pernicious effects of gender stereotype-based threat can result in performance decrements that can accumulate over time and result in

disengagement and decreased leadership aspirations. Chronically experiencing threat can result in women leaving professions early in their careers before they reach high-level leadership positions. Gender-based stereotype threat can be particularly malignant in science, technology, engineering, and math (STEM) fields (Good, Aronson, & Harder, 2008; Shapiro & Williams, 2012); it can cause women to disidentify with an entire profession and leave few women in the pipeline to assume leadership roles.

In this article, we explore the process and implications of stereotype threat for women in leadership, broadly construed. First, we provide a brief background on the phenomenon of stereotype threat generally. Second, we explore stereotype threat as it pertains to women in leadership by introducing a model of stereotype threat in leadership contexts that includes both cues to and consequences of stereotype threat as well as moderators of stereotype threat appraisals and responses. In this review, in addition to considering research focused squarely on leadership, we include the broader category of research examining stereotype threat effects in the workplace and in tasks and domains relevant to leadership. In other words, to understand the effects of stereotype threat on female leaders, it is important to consider how gender stereotypes can be threatening in the workplace (Kray & Shirako, 2011), in entrepreneurship (Baron, Markman, Hirsa, 2001), in specific tasks critical to effective leadership such as negotiations and decision making (Kray & Haselhuhn, 2008), and within specific domains including STEM. Leadership excellence in each of these tasks and these domains is often associated with stereotypically masculine traits such as rationality and agency (Kalokerinos, von Hippel, & Zacher, 2014; Kray & Shirako, 2011). Finally, we examine implications for future research, and we explore practices to reduce the potential for negative stereotype threat effects.

Background on stereotype threat

Members of marginalized social groups are often acutely aware of the stereotypes associated with their social group, and they are aware that others may respond to them based on these stereotypes. Starting with the seminal work by Steele and Aronson (1995), stereotype threat has been one of the most widely studied topics in the field of social psychology (Steele, 1997; Steele et al., 2002). Thinking that one is being evaluated through the lens of negative stereotypes can focus a person's attention on the negative aspects of a stereotype and serve to undermine achievement (e.g., Steele & Aronson, 1995). A robust body of research demonstrates the power of stereotypes in impairing the performance of stigmatized individuals, those individuals with devalued social identities in a particular context, on a wide variety of cognitive and social tasks.

In their influential work, Steele and Aronson (1995) showed that when the stereotype of African American intellectual inferiority was "in the air" and students were asked to take a test diagnostic of their abilities, Black students underperformed their White counterparts on a standardized test, controlling for initial differences in scores on the SAT. However, when they removed the relevancy of the stereotype by framing the same task as an exercise of problem solving, rather than an assessment of their intellect, there was no difference in the performance of Black and White students, again controlling for initial differences in skill level. The effects of stereotype threat on academic underperformance have been widely documented across various groups (Aronson, Quinn, & Spencer, 1998; Nguyen & Ryan, 2008; Spencer, Steele, & Quinn, 1999; Steele & Aronson, 1995). For example, researchers have shown stereotype threat effects on the academic underperformance of Latino/as and African Americans (Aronson, et al., 1998; Gonzales, Blanton, & Williams, 2002) and those with low socioeconomic status (Croizet & Claire, 1998). Moreover, stereotype threat compromises performance in domains beyond

academics; for example, threat effects have been shown for White men in athletics (Stone, Lynch, Sjomeling, & Darley, 1999), older adults in memory tasks (Hess, Auman, Colcombe, & Rahhal, 2003; Levy, 1996), and men in social sensitivity tasks (Koenig & Eagly, 2005).

One key facet of stereotype threat is that it is situationally induced. Thus, even members of traditionally advantaged groups can experience threat in certain situations. For example, White men have been shown to underperform on a math test when the stereotype of Asian superiority is made salient (Aronson et al., 1998). In one clever study designed to highlight the situational nature of stereotype threat, researchers examined the math performance of individuals who have two identities that are associated with conflicting stereotype-based expectations regarding math abilities: Asian women (Shih, Pittinsky, & Ambady, 1999). Asian women who were subtly reminded of their gender identity underperformed those in the control condition, whereas those reminded of their Asian identity performed better than the control.

The processes through which stereotype threat can lead to performance decrements in those targeted by negative stereotypes are complicated (Schmader, Johns, & Forbes, 2008). In their review of the literature, Schmader and colleagues found that stereotypes can impair performance on social and cognitive tasks through three specific yet interrelated physiological and psychological processes including: physiological stress responses that impair working memory, enhanced monitoring of one's performance, and active suppression of negative thoughts and emotions. Furthermore, according to Shapiro and Neuberg (2007), stereotype threat is not a singular process, but rather, it is a term that has been used to describe distinct, yet related, processes. They contend that there are a number of qualitatively distinct *forms* of stereotype threats. In their multi-threat framework, they maintain that the type of threat an individual experiences depends on both the *target* of the threat (who one's actions reflect upon;

self or group) and the *source* of the threat (who judges these actions; self, outgroup others, ingroup others).

Finally, like the complex processes involved in the experience of stereotype threat, the consequences are similarly multidimensional. In addition to leading to decrements in performance, these mechanisms can lead "those who contend with negative stereotypes about their ability… to avoid situations where these aversive stimuli reside" (Schmader et al., 2008, p. 353). Indeed, experiencing threats to one's identity can have wide-ranging and meaningful effects beyond the most studied outcome of academic underperformance. As Shapiro and Neuberg (2007) argue, "academic performance may be neither the most important consequence of stereotype threat nor the most effective measure for inferring its existence" (p. 111).

Stereotype threat and female leaders

As it relates to women and leadership, the most deleterious consequences of stereotype threat are, arguably, the subsequent decreases in motivation and engagement. Understanding the impact of stereotype threat processes on women in leadership contexts begins by examining the situational cues that can signal threat, the consequences of stereotype threat, and the factors that can reduce the potential of making stereotype threat appraisals and buffer women from the deleterious effects of stereotype threat. In this section, we discuss our framework for understanding the impact of stereotype-based expectations on women in leadership-relevant contexts (see Figure 1.)
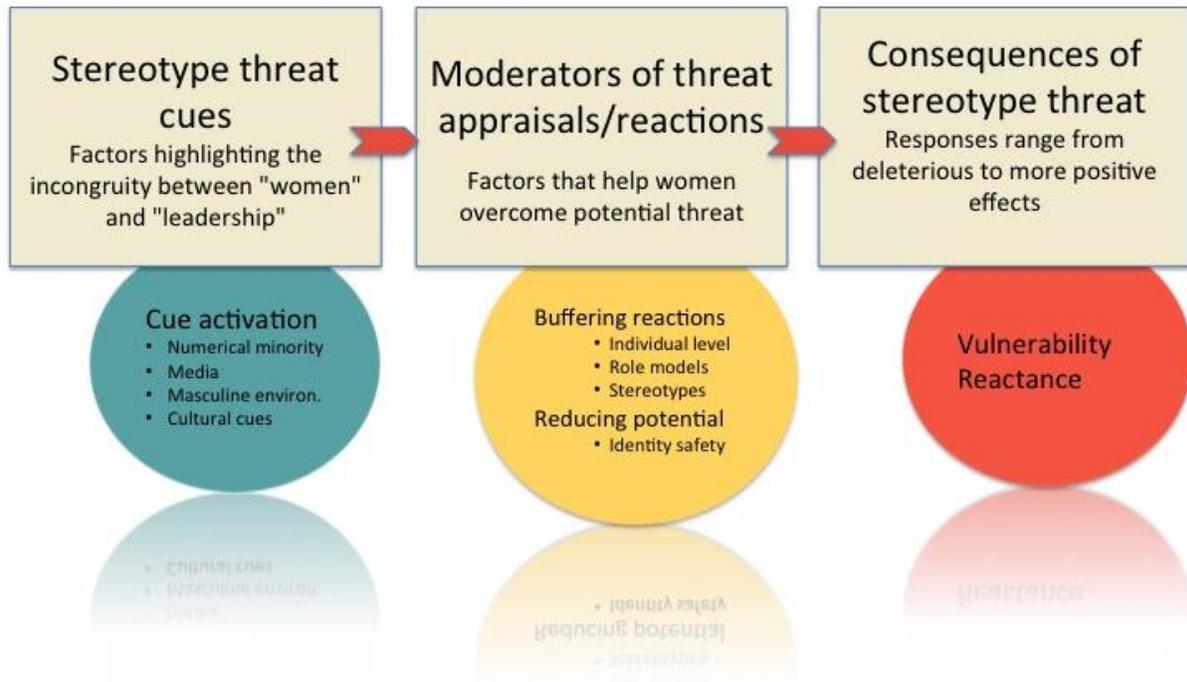
Figure 1. A model of stereotype threat in leadership contexts.

Stereotype threat cues for female leaders

Stigmatized individuals are often acutely attuned to situational cues that signal social identity contingencies (Purdie-Vaughns, et al., 2008). Exposure to chronically threatening environments can lead to an enhanced vigilance to cues that signal threat (Kaiser, Vick, & Major, 2006; Purdie-Vaughns, et al., 2008). Cues to stereotype threat can come in many forms ranging from more blatant and explicit exposure to gender stereotypes, such as telling participants that their experimenter is sexist or having them interact with a sexist man (Adams et al., 2006; Logel et al., 2009), to more subtle activation, such as simply asking someone to perform in a domain where there is a well-known stereotype "in the air" (Spencer, Steele, & Quinn, 1999). Stereotypes can be subtly activated in a variety of ways including by being in the numerical minority, such as having token or solo status as a woman leading a group of men, or by being

reminded of the paucity of women within a firm (Hoyt, Johnson, Murphy, & Skinnell, 2010; Kanter, 1977; von Hippel, Walsh, & Zouroudis, 2011). Serving as the sole member of one's social group heightens the salience of social identities, and this low demographic diversity has been shown to result in stereotype threat effects for women (Inzlicht & Ben-Zeev, 2000; Sekaquaptewa & Thompson, 2003). For example, researchers have shown that exposure to a situational cue highlighting a gender imbalance at a STEM conference decreased female students' sense of belonging and desire to participate in the conference compared to those not exposed to this identity threat (Murphy, Steele, & Gross, 2007).

Beyond being in the numerical minority, many cues, such as those found in media and in masculine environments and cultures, can threaten women's identities. For example, Davies and colleagues demonstrated that exposing women to gender stereotypic commercials (e.g., a female college student dreaming of becoming the homecoming queen or a young women demonstrating excitement over a new acne product) resulted in deleterious threat responses with respect to professional as well as leadership aspirations (Davies, Spencer, Quinn, & Gerhardstein, 2002; Davies, Spencer, & Steele, 2005). Exposure to masculine environments, including objects stereotypically associated with men, can have similarly threatening effects. For example, women who were exposed to stereotypically masculine items in their environment, including a Star Trek poster and video games, reported less interest in pursuing computer science than those not exposed to the gendered environment (Cheryan, Plaut, Davies, & Steele, 2009). Additionally, organizational cultures, particularly those permeated by a competitive ethos and the belief that success stems from innate brilliance, have the potential to be threatening (Kray & Shirako, 2011), especially as women move further up the hierarchy in leadership roles. Competitive environments that are associated with negative stereotypes implying women may not be able to

"hold their own," have been shown to be particularly threatening to women (Gneezy, Niederle, & Rustichini, 2003; Niederle & Vesterlund, 2008). Beyond competition, cultures that equate success with inherent skill can be threatening for women. Recent research has shown that "across the academic spectrum, women are underrepresented in fields whose practitioners believe that raw, innate talent is the main requirement for success, because women are stereotyped as not possessing such talent" (Leslie, Cimpian, Meyer, & Freeland, 2015, p. 262).

In sum, female leaders can experience increased threat when attempting leadership in industries and organizations where women are scarce, in contexts where gender stereotypes are made salient through the media or physical environments, or in organizational cultures extolling the virtues of competition or innate brilliance for success. In the next section, we review the various consequences of stereotype threat.

Consequences of stereotype threat: Vulnerability, reactance, or resilience

Stereotype threat has been shown to have significant adverse consequences, what we term *vulnerability responses*, ranging from decreases in performance to disengagement and disidentification from the domain. Gender stereotype-based expectations of inferiority can lead to underperformance on important tasks (e.g., negotiation, decision making) across many domains (e.g., entrepreneurship, STEM fields) relevant to leadership in contemporary society. Substantial research has shown the role of stereotypes in impairing the performance of women on STEM tasks from engineering (Bell, Spencer, Iserman, & Logel, 2003; Logel, et al., 2009) to math (Inzlicht & Ben-Zeev, 2000; Schmader, 2002; Spencer, et al., 1999). Furthermore, the threat of confirming a negative stereotype has been shown to lead to women's underperformance on negotiation tasks (Kray, Thompson, & Galinsky, 2001) as well as managerial and leadership tasks (Bergeron, Block, & Echtenkamp, 2006; Hoyt & Blascovich, 2010). Stereotype-based

concerns have also been shown to make women less fluent and use more tentative language (McGlone & Pfiester, 2015) and to alter their decision making (Carr & Steele, 2009; 2010). For example, researchers have shown that stereotype threat increased women's inflexible perseverance, that is, women were less likely to abandon ineffective strategies and choose newer more efficient ones under threat relative to no threat conditions (Carr & Steele, 2009).

The costs of stereotype threat extend beyond decreased performance. Stereotype threat can also undermine women's sense of belonging in a field and their motivation and desire to pursue success within the field (Cheryan, Plaut, Davies, & Steele, 2009). Perceiving a sense of social belonging and connectedness is crucial for motivation and achievement within any domain. In traditionally masculine fields, women often face *belonging uncertainty*. Stereotype threat can increase women's certainty that they do not belong and undermine their interest in the field (Cohen & Garcia, 2008; Walton & Cohen, 2007). For example, women subtly primed with the female identity expressed a greater interest in arts-oriented domains over mathematics, a preference not demonstrated in the control condition (Steele & Ambady, 2006). Similarly, stereotypic gender commercials have been shown to lead women to emphasize homemaking, rather than achievement, themes when describing their future lives (Geis, Brown, Jennings, & Porter, 1984). Davies and colleagues (2002, 2005) found that gender stereotypic commercials undermined women's leadership aspirations (Davies et al., 2005) as well as their interest in quantitative, relative to verbal, majors and career paths (Davies et al., 2002). Related research demonstrated that threatening women with the gender stereotype that associates men with entrepreneurship diminished female business students' entrepreneurial intentions (Gupta & Bhawe, 2007). Many of these belongingness and motivational costs are undergirded, in part, by the adverse effects of stereotype threat on self-confidence (Stangor, Carr, & Kiang, 1998) and

job attitudes (von Hippel, Kalokerinos, & Henry, 2013). For example, researchers have shown that women who experienced chronic stereotype threat in the legal profession had less confidence that they would reach their career goals, less positive attitudes toward their job, and more intention to quit (von Hippel, Issa, Ma, & Stokes, 2011).

Other potential consequences of stereotype threat revolve around making the stereotype less self-relevant. In the face of stereotype threat women frequently try to separate their sense of self-worth from their performance in that domain oftentimes by distancing themselves from the domain or from the devalued group. Disengagement from a domain that is threatening to one's self-worth can be ego protective and can facilitate persistence and motivation in the short term (Nussbaum & Steele, 2007); however, it can also lead to reduced performance, motivation, and ultimately, disidentification from the domain altogether (Crocker, Major, & Steele, 1998; Major & Schmader, 1998).

When distancing oneself from the stereotyped *group*, women can either disavow the entire "female" identity, or they can selectively disidentify with aspects of the group's identity that are linked to negative expectations in the domain, termed identity bifurcation (Pronin, Steele, & Ross, 2004). In the face of both chronic and acute stereotype threat, women have been shown to alter their professional identities (Kalokerinos, von Hippel, & Zacher, 2014). For example, when female professionals, from lawyers to accountants, experienced stereotype threat in their workplace environments, they responded by separating their work identity from their gender identity (von Hippel, Issa, et al., 2011; von Hippel, Walsh, et al., 2011). Although differentiating between "feminine" and "work" selves can be viewed as a type of ego-protection, it can come with costs; disengagement is associated with a lack of belonging at work and a host of negative job-related attitudes. In a recent study of women in finance, researchers showed that

greater feelings of stereotype threat were associated with diminished well-being and a lower likelihood of recommending a career in finance to other women, and these relationships were mediated by identity separation (von Hippel, Sekaquaptewa, & McFarlane, 2015).

Another way people work to make stereotypes less self-relevant is by actively engaging in counter-stereotypical behavior; that is, they engage in *reactance responses*. However, these reactance responses have the potential to produce unintended costs. For example, when women were threatened by the stereotype that men are better leaders, they adopted a more masculine communication style compared to those who were not threatened (von Hippel, Wiryakusuma, Bowden, & Shochet, 2011). However, this strategy came with social costs: others responded negatively to this new communication style by being less likely to comply with their requests and viewing them as less likeable and warm. In related research, explicitly activating the negative stereotype associating women with inferior negotiation ability provoked women to engage in strong and effective negotiation behavior (Kray, Thompson, Galinsky, 2001). However, research shows that this too might come with unexpected disadvantages. That is, women face greater social costs when negotiating than men do; thus, women's greater reluctance to negotiate may represent an adaptive response to social disincentives (Bowles, Babcock, & Lai, 2007).

Although reacting against the stereotype can be costly, these responses can also result in favorable outcomes. In an early demonstration of stereotype reactance, Kray and colleagues showed that whereas women underperformed men at the bargaining table when the stereotype of women being less adept at bargaining was implicitly activated, when the stereotype was blatantly presented women reacted against it and they outperformed men (Kray et al., 2001; Kray, Reb, Galinsky, & Thompson, 2004). This performance boosting response to explicit activation of

negative stereotypes has also been shown by women in entrepreneurship (Gupta, Turban, & Bhawe, 2008) and in leadership contexts (Hoyt & Blascovich, 2007, 2010).

Whether women respond to threats to their identity with vulnerability responses, reactance responses, or an impervious resiliency depends on a number of factors. In the next section, we review factors that enable women to be impervious to or, better yet, react adaptively to negative stereotype-based expectations.

Overcoming potential threats: Moderators of stereotype threat reactions and appraisals

Much of the current research on stereotype threat attempts to identify factors that help reduce either negative threat reactions or the potential for making stereotype threat appraisals in the first place. Accordingly, in this section we will review factors that help buffer women against negative stereotype threat effects as well as factors that reduce the potential that women will evaluate the situation as one in which they will be judged and treated poorly based on a negative stereotype. These factors reside at various levels from the individual, to the interpersonal, to organizational/situational levels.

Buffering against stereotype threat effects

Individual-level factors. Whether women meet potential threats to their identity with vulnerability or reactance responses is dependent, in part, upon a host of individual differences factors that are related to the extent to which they see themselves as having, or being able to develop, leadership abilities. For example, researchers have shown that only women who rated themselves low, as opposed to high, on traits stereotypically associated with the leader role (such as ambition, self reliance, independence, and assertiveness) demonstrated decreased performance in the face of stereotype threat (Bergeron, Block, & Echtenkamp, 2006). In general, research shows that individual differences that serve to bolster women's belief that they have the ability to

be a successful leader, including leadership self-efficacy, power, and mindsets about the nature of leadership, can help buffer women from deleterious threat effects.

In both the leadership and negotiation domains, women have been shown to respond to explicit gender stereotype activation with positive, *I'll Show You* responses when they have sufficient power and self-efficacy. For example, Kray and colleagues demonstrated that women successfully reacted against the gender bargaining stereotype when they were in put in a high power bargaining condition where they had leverage from a favorable alternative offer (Kray, et al., 2004). Related, researchers have shown that women's aversion to initiating negotiations was diminished when they were primed with power (Small, Gelfand, Babcock, & Gettman, 2007). In the domain of leadership, Hoyt and colleagues have shown that women who were highly confident in their leadership ability, as indicated by high levels of leadership self-efficacy (Murphy, 1992), responded positively when put in a position to disconfirm the gender-leadership stereotype on a task requiring women to advise and motivate employees on a simulated hiring committee (Hoyt & Blascovich, 2007, 2010). Specifically, women with high levels of leadership self-efficacy performed better, identified more with the domain of leadership, and reported greater levels of psychological well being.

How people respond to threats to their identity is also determined in part by their mindsets; that is, the lay theories they hold regarding the extent to which various human characteristics can be conceptualized as malleable (growth mindset) versus stable (fixed mindset; Dweck, 1999). Both high levels of leadership self-efficacy and a growth mindset of leadership, that is, the belief that leadership abilities can be cultivated, have been shown to play an important role in buffering against deleterious stereotype threat effects in a leadership context (Burnette, Pollack, & Hoyt, 2010). Similarly, mindsets have also been shown to be important for women

facing gender stereotypes in negotiation contexts. For example, experimentally manipulating

beliefs that entrepreneurial ability can be increased led women to show greater resilience, in the

form of self-efficacy for future entrepreneurial endeavors, in the face of stereotype threat relative

those induced to believe in the fixed nature of entrepreneurial ability (Pollack, Burnette, & Hoyt,

2012). Finally, Kray and colleagues demonstrated that only women who were led to believe that

negotiating skills can be developed, versus cannot be developed, were able to successfully react

against the blatant stereotype that women are inferior negotiators as demonstrated through

increased negotiation performance (Kray, Locke, & Haselhuhn, 2010).

 Role models. Beyond individual level factors unique to each woman, whether a woman

meets threats to her identity with vulnerability or reactance responses or whether she is

impervious to the threat depends upon important interpersonal factors. In particular, female role

models can play an important role in protecting women from threats to their identity in

leadership roles. The effectiveness of these women comes, in part, because they demonstrate that

success in the stereotyped domain is attainable, and the models can both increase a sense of

social belonging and inoculate people's sense of self against identity threats (Dasgupta, 2011;

Marx, Ko, & Friedman, 2009; Marx & Roman, 2002; McGlone, Aronson, & Kobrynowicz,

2006).

 The influence of female role models in increasing women's aspirations has been

demonstrated in a randomized natural experiment in India. Exploiting a gender quota law that

reserved leadership positions for women, and did so in randomly selected villages, researchers

found that the increased representation of women on Indian village councils resulted in greater

career and educational aspirations for local girls and eliminated the gender gap in educational

attainment (Beaman, Duflo, Pande, & Topalova, 2012). Arguably, concerns about being

evaluated through the lens of negative stereotypes played a meaningful role in these girls' career aspirations, and the role models helped inoculate the girls from this threat. Indeed, stereotype threat dwells "in the air" in stereotype-relevant domains; thus, even when threat is not directly and explicitly examined in research, stereotype threat processes are still at work when people find themselves in contexts where self-relevant negative stereotypes abound (Schmader, et al., 2008; Steele, 1997).

Role models, however, can have contradictory effects. Although comparing oneself to a successful other can potentially be inspiring and offer one hope, it also has the potential of being self-deflating by highlighting how deficient one is in comparison (Collins, 1996, 2000; Lockwood & Kunda, 1999; Suls, Martin, & Wheeler, 2002; Wood, 1989). For example, exposure to highly successful female business leaders has been shown to decrease women's self-ratings of competence (Parks-Stamm, Heilman, & Hearns, 2008). Similarly, learning about counter-stereotypical role models (e.g., a female surgeon or a female business executive) reduced women's leadership self-concept and diminished their interest in traditionally masculine occupations relative to those not exposed to these role models (Rudman & Phelan, 2010).

Although role models have the potential to result in self-deflation, they also hold great potential to be inspiring and help buffer women from stereotype threat effects. For example, reading about successful female mathematicians and viewing images of female scientists has proven effective in thwarting negative stereotype threat effects in science and math (Good, Woodzicka, & Wingfield, 2010; McIntyre, et al., 2005; McIntyre, Paulson, & Lord, 2003). Role models can be particularly effective at hindering deleterious stereotype threat effects in the domain of leadership. In recent research, subtle and implicit exposure to a picture of elite female role models positively influenced women's self-appraisals and behavior during stressful

leadership tasks (Latu, Schmid Mast, Lammers, & Bombari, 2013). Other research has shown

that exposure to counter-stereotypical portrayals of women in the media was effective in

buffering women from stereotype threat effects in the leadership domain (Simon & Hoyt, 2012).

Specifically, they found that women exposed to media images depicting women in counter-

stereotypical roles reported stronger nontraditional gender role beliefs, less negative self-

perceptions, and greater leadership aspirations than women exposed to images of women in

stereotypical roles. These lines of research point to the great potential that both role models and

positive media images have to inspire female leaders and counter the effects of negative

stereotype-based expectations.

Researchers have begun to delineate when leader role models will be injurious and when

they will be inspiring to women. One important moderator of the impact of leader role models on

women is the extent to which they are able to identify with the role models and deem their

success attainable. For example, examining women's performance in the stereotype-threatening

domain of leadership, Hoyt and Simon (2011) found that whereas exposure to elite female

leaders had self-deflating effects on women's leadership aspirations and self-perceptions

following a leadership task, similar exposure to less elite female role models with whom the

women could identify, did not have this negative impact. In related research, female accountants

who read about a successful female partner experienced significantly lower levels of stereotype

threat than those who read about a successful male accountant (von Hippel et al., 2011b).

Follow-up research demonstrated that the female role model was effective in that she evidenced

that the organization is supportive of women. Finally, individual-levels factors are also important

in determining people's responses to role models. For example, women with high, versus low,

levels of leadership efficacy were more inspired by elite role models, when put into a potential

threat-inducing leadership situation; that is, they showed heightened levels of leadership aspiration, leader self-identification, and performance (Hoyt, 2013). Additionally, the more that people endorse the idea that leadership abilities are malleable and can be cultivated, as opposed to believing they are fixed, the more positively they respond to leader role models (Hoyt, Burnette, & Innella, 2012).

Number and explicitness of stereotype cues. Other moderators of stereotype threat reside in the nature of the cues themselves. Responses to stereotype threat depend, in part, upon the explicitness of the activation of the stereotype. As Kray and colleagues have shown in the negotiation context, implicit stereotype activation results in women fulfilling the negative stereotype regarding their underperformance relative to men, whereas explicit activation prompts reactance responses (Kray et al., 2001; Kray et al., 2004). In addition to the manner in which stereotypes are activated, the number of sources of identity threat is also important. For example, researchers have shown that when women experienced individual stereotype threats in the leadership domain they demonstrated reactance responses; however, when the threats were combined they resulted in negative vulnerability responses (Hoyt, et al., 2010). This research highlights the slippery slope female leaders can face; women often find themselves exposed to multiple sources of threat including being a solo woman in a group, and facing biased perceptions and expectations.

Reducing the potential for threat appraisals

In this section, we hone in on those factors that can help reduce the potential that women will make threat appraisals in the first place. Many of the factors examined, often in the context of threat reduction interventions, reside at the situational level. At the individual level, there is an unfortunate irony associated with the stereotype threat phenomenon: stereotype threat tends to

have the most deleterious effects on those for whom the stereotype is the most self-relevant and on those who are most motivated to perform well. For example, researchers have shown that the more women identified with their gender, the threatened identity, the more vulnerable they were to stereotype threat (Schmader, 2002). Related, women who were highly conscious of the stigma associated with the category "woman" were more prone to stereotype threat effects than those lower in stigma consciousness (Brown & Pinel, 2003). Other research shows that stereotype threat effects are most pronounced in those for whom performance in the domain is highly important and self-relevant (Aronson, et al., 1998; Cadinu, Maass, Frigerio, Impagliazzo, & Latinotti, 2003; Cadinu, Maass, Lombardo, & Frigerio 2006). For example, in the domain of entrepreneurship, where those with proactive personalities (having the tendency to take action to change one's circumstances) are more likely to become entrepreneurs, research showed that women with higher levels of proactive personality were more likely to show deleterious threat responses than women with less proactive personalities (Gupta & Bhawe, 2007). For those higher in proactivity, being an entrepreneur was very important to them; therefore, they were more vulnerable to the effects of stereotype threat.

Fortunately, there are situational and contextual factors that can help reduce the potential that even very motivated and invested women will make stereotype threat appraisals. Many workplaces are replete with cues to negative gender stereotypes, such as low numbers of women in the upper echelons of the organization, and these cues evoke the potential for stereotype threat effects. One potent approach to reducing the potential for threat is by creating identity safe environments. These environments "challenge the validity, relevance, or acceptance of negative stereotypes linked to stigmatized social identities" (Davies et al., 2005, p. 278). In a vivid example of this, after removing the emphasis on risk-taking from the selection criteria for the

prestigious National Institutes of Health Director's Pioneer Award, there was a marked increase

in the number of female scientists who applied for and won the award (Burgess et al., 2012;

Carnes, Geller, Fine, Sheridan, & Handelsman, 2005). A reduction in stereotype threat has been

credited as one contributor to this increase (Burgess et al., 2012).

Empirical research signifies the power of identity safe tasks in reducing threat effects. For

example, whereas exposure to stereotypic commercials undermined women's leadership

aspirations, presenting the leadership task as identity safe, that is, telling participants that there

are no gender differences on the leadership task, eliminated this vulnerability (Davies et al.,

2005). In another study, women showed deleterious threat effects by underperforming men on a

managerial task when the predecessor was described as a man with stereotypically masculine

traits, but they did not show these performance decrements when the previous manager was

described as a woman with female characteristics (Bergeron, Block, & Echtenkamp, 2006). The

task of negotiation can be made identity-safe by framing the situation as an opportunity of asking

rather than an opportunity for negotiation (Small, Gelfand, Babcock, & Gettman, 2007).

Although women were less likely to initiate negotiations than men, when framed as an

opportunity to ask, women were equally likely to initiate at the bargaining table (Small et al.,

2007). Other aspects of the negotiation context can exacerbate or attenuate the potential for

stereotype threat effects in women. For example, research has shown that the gender stereotypic

effects on negotiation were decreased when the context was less ambiguous such that both

parties had a clear understanding of what is meant by a good outcome and what is expected of

them, as well as when the negotiations occurred virtually as opposed to face-to-face (Bowles &

Kray, 2013). Finally, emphasizing positive stereotypes and de-emphasizing negative stereotypes

can be effective. For example, explicitly valuing feminine traits or highlighting the power of

education, career aspirations, and work experience in the negotiation context buffered women

from stereotype threat effects (Kray et al., 2001; Kray, Galinsky & Thompson, 2002).

Moreover, identity safe environments and organizational cultures go far in minimizing

threat effects. In the field of medical leadership, a message designed to encourage medical

students without leadership experience to volunteer to lead their workgroup by stating that the

small group provided a "safe" environment to practice leadership significantly increased the

number of groups choosing female leaders (Wayne, Vermillion, & Uijtdehaage, 2010). Similarly,

presenting entrepreneurship as a gender-neutral domain reduced the potential for stereotype

threat and eliminated the gender gap in entrepreneurial intentions (Gupta, et al., 2008).

Organizational cultures can also promote identity safety. For example, organizations that endorse

growth, as opposed to fixed, beliefs by advocating the belief that everyone can expand their

intelligence and abilities can foster identity safety and combat stereotype threat. Specifically,

women demonstrated greater trust in and less disengagement from a consulting company when it

espoused a growth, rather than a fixed, mindset (Emerson & Murphy, 2015).

Implications for future research and practice

In this section we examine questions for future research, and we explore practices to

reduce the potential for negative stereotype threat effects. There is great potential for researchers

examining the role of stereotype threat in the leadership process to focus on changing

stereotypes, the changing nature of gender bias, and identities beyond the female social identity.

Additionally, in this section we briefly explore the potential of organizational actions and

development initiatives in helping ameliorate negative threat-based outcomes.

Implications of changing stereotypes and changing bias on stereotype threat effects

As the incongruity between the female gender role and the leader role decreases, so does the potential for stereotype threat. There is some evidence that gendered stereotypes of leaders are changing (Koenig, et al., 2011). A meta-analysis of nearly 70 studies across three research paradigms that examined the masculinity of leader stereotypes showed that there is a strong and robust masculine construal of leadership. However, this research also showed that it has decreased over time. There has been a cultural change such that leadership is increasingly being thought of as an androgynous endeavor requiring both agency as well as communal relational skills (Koenig et al., 2011). A more androgynous conception of leadership can whittle away the stereotype-based expectations of inferiority placed on female leaders and in turn reduce the potential for stereotype threat effects.

Other research has noted that the potential for stereotype threat remains relatively unchanged as the overt sexism and exclusion of women in first generation discrimination has mostly been replaced with second-generation forms of bias and discrimination (Sturm, 2001). This second generation discrimination is described as:

"[F]requently involve[ing] patterns of interaction among groups within the workplace that, over time, exclude non-dominant groups. This exclusion is difficult to trace directly to intentional, discrete actions of particular actors.... This form of harassment may consist of undermining women's perceived competence, freezing them out of crucial social interactions, or sanctioning behavior that departs from stereotypes about gender or sexual orientation. It is particularly intractable, because the participants in the conduct may perceive the same conduct quite differently. Moreover, behavior that appears gender neutral, when considered in isolation, may actually produce gender bias when connected to broader exclusionary patterns." (Sturm, 2001, p. 489-490)

Sturm (2001) suggests that second generation discrimination flourishes in organizations that require adaptability, flexibility, and technical innovation. These workplaces often adopt decentralized governance structures that can foster patterns of interactions, decision making, and relationships that exclude women. These subtle gender-based forms of discrimination can result in stereotype threat effects for women in leadership roles. Therefore, while stereotype incongruity might be lessening somewhat, there remain ample possibilities for stereotype threat to occur.

Intersecting identities and stereotype threat

The experience of stereotype threat processes in leadership contexts extends beyond women. Although the focus of this article is on gender, there are other social identities that can be devalued in leadership contexts (Sanchez-Hucles & Davis, 2010; Walton, Murphy, & Ryan, 2015). For example, in addition to having a masculinity standard, leadership also has a White standard. Namely, being White has been shown to be a central component of the leader prototype in America (Rosette, Leonardelli, & Phillips, 2008). However, unlike the research examining gender and leadership, research into minority leaders is scant although it is increasing (Carton & Rosette, 2011). Although many of the stereotype threat processes associated with minorities in leadership may bear similarities to those experienced by women, the underlying dynamics and mechanisms may be somewhat distinct.

Moreover, in reality we all have many various identities that interrelate and our experiences are shaped by the simultaneous influences of these identities. Traditionally, social scientists have examined people's many social identities in isolation, rarely taking intersectionality perspectives that consider and account for the intersection of multiple categories of social group membership (Cole, 2009). Research at the intersection of racial and gender

identities is in its infancy (Livingston, Rosette, & Washington, 2012; Rosette & Livingston,

2012), and more work, focusing on a broader array of identities, is warranted. For example, older

workers have been shown to experience stereotype threat resulting in increased turnover

intentions, lowered job satisfaction, and lowered well being (von Hippel, Kalokerinos, & Henry,

2013); however, no studies to date have looked at older women, or older women of color.

Leadership researchers should put a greater emphasis on understanding the role of race,

ethnicity, sexual orientation, age, and other types of diversity, as well as important interactive

effects between these identities, in leadership processes.

Actions to reduce/nullify the potential for and the effects of stereotype threat

Changes focused on both reducing the effects of stereotypes and increasing identity safe

contexts are essential for reducing stereotype threat effects. Programs for reducing stereotype

threat typically focus on modifying the context and/or lessening individual reactions (Block et

al., 2011; Burgess et al., 2012; Kray & Shirako, 2011; Roberson & Kulik, 2007). Many

organizations are proactively developing ways to reduce second-generation discrimination and

stereotype threat (Ely, Ibarra, & Kolb, 2011). Williams (2014) recommends a three step

approach: undertake organizational audits to examine gendered practices, identify methods of

tracking the efficacy of interventions, and implement interventions to curb the bias, what she

terms "bias interrupters." The research literature offers a number of fruitful approaches to

reducing the potential for and the negative effects of stereotype threat the include, but are

certainly not limited to: (a) making employees, and senior leaders in particular, aware of

unconscious biases and unwarranted stereotypes that affect their evaluations of others; (b)

examining the "gendered" aspects of their organizations or jobs that disadvantage individuals

who do not adapt a male style of leadership within the organization (Acker, 1990); (c) increasing

minority representation at all organizational levels; (d) presenting stereotype inconsistent information in order to help reduce stereotyped thinking (Fiske & Neuberg, 1990); (e) capitalizing on the stereotype threat-reducing effects of successful ingroup role models (Dasgupta & Asgari, 2004); and (f) making explicit the characteristics of good leadership that avoid stereotyped descriptions (Burgess, et al., 2012; Leicht, de Moura, & Crisp, 2014). These interventions will go far to bring about equitable organizations that enable everyone to flourish.

As we have shown, the effects of stereotype threat depend in part on the extent to which women see themselves as having, or being able to develop, leadership abilities. This suggests that programs focused on increasing both leadership abilities and leader identity hold great potential in helping inoculate women from stereotype threat. In terms of developing leadership abilities, we can look to the research literature focused on women and leadership for guidance. For example, Eagly and Carli (2007) recommend that women develop the ability to lead using both agentic and communal qualities to satisfy today's leadership requirements, and they also suggest that women develop their social capital to increase connections and support in their profession. In addition to developing existing skills or acquiring new competencies, it is also important to cultivate women's leader identity (Day et al., 2014; Day, Harrison, & Halpin, 2009). Finally, interventions designed to increase women's belief that leadership abilities can be cultivated, or growth mindsets of leadership, are promising for buffering women from stereotype threat effects (Burnette et al., 2010; Ely, Ibarra, & Kolb, 2011; Pollack et al., 2012).

Summary

In this article, we explored the ways in which stereotype threat can undermine women in leadership. We identified cues that serve to activate stereotype-based concerns, we examined the multifaceted consequences of stereotype threat, and we discussed factors that can help buffer

women from potential deleterious effects of stereotype threat. A greater understanding of how

social identities can be threatening in the domain of leadership can help encourage and enable

women and other underrepresented individuals to participate fully in and contribute to the

prosperity of the political, civil, social, economic, and cultural lives of society.

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