The Effects of Stereotypes of Women's Performance in Male-Dominated Hierarchies: Stereotype Threat Activation and Reduction Through Role Models

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Abstract

Despite recent progress in increasing gender equality in organizations, workplace hierarchies remain male-dominated in most domains. We discuss how gender stereotypes contribute to holding women back in leadership and workplace domains and how we can reduce the negative effects of gender stereotypes. In the first part of the chapter we discuss how awareness of negative stereotypes of women in leadership can decrease women's performance and self-related cognitions in leadership tasks such as motivating employees, managerial decision-making, and negotiating. In the second part of the chapter we discuss effective strategies to reduce the negative effects of stereotypes. We particularly focus on the strategy of exposing women to counterstereotypic exemplars – women who succeeded, thus disproving the stereotype. Given that exposures to successful women can have both threatening and inspiring effects, we propose a model which discusses the conditions under which successful female role models would inspire women with leadership aspirations.

Despite recent progress in increasing gender equality, hierarchies remain male-dominated in most political and business domains. For example, across the world, only 21.8% of members of parliament are female (The Inter-Parliamentary Union, 2014), and of the 196 nations across the world, only 22 are led by women. Women are also underrepresented in the business domain, a trend that tends to increase as we consider higher levels of the hierarchy. For instance, although women comprise 47.3% of the US labor force, the percentage of women occupying top leadership positions, such as Fortune 500 CEOs remains quite low – 5.2% (Catalyst, 2014).

Gender stereotypes also reflect this disadvantage for women in male-dominated domains, as women are generally less likely than men to be associated with leadership (Koenig, Eagly, Mitchell, & Ristikari, 2011). How harmful are those stereotypes for women with leadership aspirations? Are they powerful enough to lead women to perform and feel worse in leadership? And if this is the case, what can we do about it?

In the current chapter we first discuss the consequences of negative stereotypes on women's performance and self-related cognitions in leadership domains. Second, we explore effective strategies to reduce the impact of negative stereotypes for women in leadership. Please see figure 5.1 for a visual representation of the contents of this chapter.

<FIGURE 5.1 HERE>

Gender Stereotypes in Male-Dominated Hierarchies

Stereotypes are cognitive structures that contain our beliefs about certain social groups. Inherent to stereotyping is the belief that all members of the groups share the same characteristics (Judd, Ryan, & Parke, 1991). Research has documented several stereotypes of men and women: women are seen as more communal, whereas men as more agentic (Rudman & Glick, 2001), women as more egalitarian, whereas men as more hierarchical (Schmid Mast, 2004), women more fitting with teaching jobs, whereas men with engineering and accounting jobs (White & White, 2006).

Within leadership, political, and business domains, gender stereotypes continue to disadvantage women, as evident from several research paradigms. For example, in Schein's *think manager – think male paradigm* participants rated leaders, women, and men on several traits such as intuitive, dominant, curious, competent, emotionally stable (Schein, 1973; Schein, Mueller, Lituchy, & Liu, 1996). Across 40 studies, leader stereotypical traits correlated more strongly with masculine traits (intraclass correlation = .62) compared to feminine traits (intraclass correlation = .25), according to a meta-analysis published in 2011 (Koenig et al., 2011). In other words, leaders are stereotypically seen as more similar to male compared to female stereotypes. Research from the agency-communion paradigm (Powell & Butterfield, 1984, 1989) yielded similar findings, with good leader stereotypes being perceived as having more agentic (masculine) than communal (feminine) characteristics. Drawing from the role congruity model (Eagly & Karau, 2002) and the lack-of-fit model (Heilman, 1983, 2001), this mismatch between leader stereotypes and feminine stereotypes poses a potential threat for women who aspire to be become leaders because it makes feminine qualities undesirable for leadership, possibly leading to negative evaluations of female leaders (Heilman, Block, & Martell, 1995).

Not only there is a mismatch between leader stereotypes and female stereotypes, but once women are considered in the leadership context, research shows that individuals tend to hold negative stereotypes of female managers. For example, female managers were attributed more negative attributes compared to male managers (Heilman et al., 1995). Although there has been some improvement in individuals' explicit gender stereotypes in the last few decades such that female managers are seen as more assertive, more ambitious, and less submissive than in the past (Duehr & Bono, 2006; Stoker, Van der Velde, & Lammers, 2012), we still see negative stereotypes of female managers at implicit (relatively unconscious) levels. For example, across two studies (Latu et al., 2011) we found that women were more likely than men to be implicitly associated with incompetent managerial traits (e.g. *follower, incompetent, ignorant*), whereas men were more likely than women to be implicitly associated with competent managerial traits (e.g. *leader, competent, knowledgeable*).

The Consequences of Gender Stereotypes for Women's Performance and Self-Related Cognitions

How do these stereotypes affect women in male-dominated domains? We will review the literature on the effects of gender-leadership stereotypes on women's performance and self-related cognitions, which we define as any thoughts about the self that are assessed through self-report measures and can include self-evaluations, self-stereotypes, leadership aspirations, and entrepreneurial intentions.

A wealth of research has demonstrated that being aware of negative stereotypes about our ingroup can negatively affect performance in the relevant domain, a phenomenon known as stereotype threat (Steele, 1997; Steele & Aronson, 2000). Stereotype threat is a situational factor and it can be activated in three different ways (Nguyen & Ryan, 2008): blatant (explicitly stating the target group's inferiority, for example that women are not as good at math as men), moderately explicit (stating that a math test, for example, produces gender differences without specifying which group tends to perform better), and implicit (making gender salient, through emphasizing test diagnosticity, exposing women to gender stereotypic commercials, or manipulating the gender composition of the group).

In terms of outcomes, across several studies, women who were primed with negative gender stereotypes showed decreased performance on math tests (Schmader & Johns, 2003; Spencer, Steele, & Quinn, 1999) as well as decreased interest in quantitative domains such as mathematics, engineering and computer science (Davies, Spencer, Quinn, & Gerhardstein, 2002). Overall, stereotype threat has an important, negative effect on women's performance and self-related cognitions in STEM (science, technology, engineering, and mathematics). The idea is that women's concerns about confirming negative stereotypes about their gender group (e.g. the stereotype that women are not good at math) can interfere with their performance and self-related cognitions, possibly because of unsuccessful attempts to suppress self-relevant stereotypes (Logel, Iserman, Davies, Quinn, & Spencer, 2009) and subsequent decreased working memory capacity (Schmader & Johns, 2003) or increased arousal (Ben-Zeev, Fein, & Inzlicht, 2005).

Although the evidence is sparser, stereotype threat seems to also affect women's self-related cognitions in leadership domains. Women exposed to TV commercials depicting women in gender stereotypical roles (e.g. homecoming queen) were less interested in choosing a leadership role in a subsequent task (Davies, Spencer, & Steele, 2005). Similarly, gender stereotype threat activation decreased women's entrepreneurial intentions (Gupta & Bhawe,

2007) and women's confidence in their likelihood of reaching their career aspirations (Von Hippel, Issa, Ma, & Stokes, 2011). It also had more profound implications on women's identities, such that female leaders who experienced stereotype threat were more likely to separate their female identity from their work-related identity (Von Hippel, Issa et al., 2011). Overall, these damaging effects on women's leadership self-related cognitions are dangerous for women in male-dominated domains because they can lead women to withdraw from leadership and business domains that evoke such stereotype threat.

Negative stereotypes not only affect women's self-related cognitions, but also their actual performance on several leadership tasks. In a hypothetical managerial decision-making task (Bergeron, Block, & Echtenkamp, 2006), participants played the role of a manager whose role was to make decisions for six memos dealing with complex organizational issues, such as granting maternity leave, recruiting, sexual harassment, permitting a job training course, hiring a manager, selecting a research firm. Each of these memos had a correct answer, against which participants' decisions were coded by two independent coders. Women who performed this managerial task under stereotype threat showed a decrease in both the quantity and the quality of their managerial decisions. Similarly, women under stereotype threat activation adopted a more masculine communication style, which in turn led to more negative evaluations and less managerial effectiveness (von Hippel, Wiryakusuma, Bowden, & Shochet, 2011). In a leadership task such as influencing and motivating employees, stereotype threat led to decreased leadership performance for those female participants low in self-efficacy (Hoyt & Blascovich, 2010). Finally, negotiation skills have also been affected by stereotype threat. When negative leadership-gender stereotypes were activated (i.e. when stereotypically feminine traits were linked to poor negotiation outcomes), women performed less well than men (Kray, Thompson, & Galinsky, 2001; Tellhed & Björklund, 2011). Overall, these findings show that not only women *feel* threatened and discouraged when negative leadership stereotypes are activated, but their performance actually suffers.

Reducing the Negative Consequences of Gender Stereotypes

How can we reduce the negative effects of stereotype threat for women in leadership? Several strategies of stereotype threat removal have proved to be efficient, such as changing the masculinity of the successful negotiator. This strategy involves training participants to associate stereotypically feminine traits (emotional expressivity, listening skills, interpersonal

sensitivity) with the stereotype of successful negotiators (Kray, Galinsky, & Thompson, 2002). Another successful strategy is that of self-affirmation, in which participants are encouraged to think about values that are important to their self prior to performing the evaluation task (von Hippel, Wiryakusuma et al., 2011).

In addition to these strategies, research has been successful at identifying individual differences which moderate women's response to stereotype threat. For example, research shows that women with high levels of leadership self efficacy are more likely to show heightened levels of leadership aspiration, leader self-identification, and performance when exposed to highly successful role models (Hoyt, 2013; Hoyt & Blascovich, 2010). Also, believing that leadership ability is malleable ("leaders are made") rather than fixed ("leaders are born") led to more positive reactions to role models (Burnette, Pollack, & Hoyt, 2010; Hoy, Burnette, Innella, 2012). Finally, having a less proactive personality seems to predict positive reactions to role models (Gupta & Bhawe, 2007).

Overall, situational factors such as the explicitness of the stereotype, the group sex-composition, and the power of the person can also modulate the responses to stereotype threat (for a review in the quantitative performance literature see Nguyen & Ryan, 2008). In addition to these situational factors, factors related to interpersonal relations are also important. Particularly, in the reminder of the chapter we focus on role models: exposing women to counterstereotypic exemplars of their own group – highly successful, powerful women, who through their success have disproved the negative stereotype of women in leadership. This is a particularly controversial strategy for reducing the negative effects of stereotypes and thus empowering women in male-dominated hierarchies.

Research on female role models in leadership shows that exposure to such highly successful women can have both negative and positive effects. On the one hand, incredibly successful women can empower women in leadership, by challenging negative stereotypes and making women feel that they can do it too (assimilation effects). On the other hand, they can lead to negative effects, because women exposed to other highly successful women may feel threatened and discouraged, ultimately leading them to believe that they could never achieve that level of success (contrast effects). Using social comparison theory (Festinger, 1954) and more specifically the selective accessibility model (Mussweiler, 2003) as a theoretical

framework, we will present research supporting both these claims (including our research) and later attempt to resolve this debate.

According to the social accessibility model applied to social comparisons, when comparing to others, people may either take one of two strategies. They can either engage in similarity testing, which implies selectively focusing on similarities with the role model. Alternatively they can engage in dissimilarity, which implies selectively focusing on dissimilarities to the role model.

Contrast: threatening effects. Social comparison with highly successful others can lead either to contrast or assimilation effects (Mussweiler, 2003). Contrast occurs when comparisons with a highly successful person has unintended negative effects – for example, participants primed with Albert Einstein experienced decreased performance on intelligence tests (Dijksterhuis et al., 1998). Overall, highly successful others that are relevant to self (LeBoeuf & Estes, 2004) but whose success seems unattainable (Lockwood & Kunda, 1997) tend to elicit contrast, thus hurting self-evaluations and performance. This hypothesis was indeed supported when exposing women to highly successful female leaders. For example, women exposed to other highly successful women showed lower self-evaluations (Hoyt & Simon, 2011; Parks-Stamm, Heilman, & Hearns, 2008), weaker self-leadership associations (Rudman & Phelan, 2010), and lower leadership aspirations (Hoyt & Simon, 2011). For instance, exposures to high-level female leaders before performing a leadership task led women to self-report lower self-evaluations, greater feelings of inferiority, and lower leadership aspirations compared to exposures to high-level male leaders or controls (Hoyt & Simon, 2011). Similarly, exposing women to a successful female CEO decreased their competence self-ratings (Parks-Stamm, Heilman, & Hearns, 2008). Women's self-stereotypes were also affected: priming with highly successful women (professor at Stanford Business School, organ transplant surgeon, president of the Global Financial Services division) led to weaker self-leadership associations and less interest in those high-power occupations (Rudman & Phelan, 2010). Exposures to women in high-profile leadership positions also led to increased self-stereotyping, deflated career goals, and less likelihood to associate leadership with the self at an explicit level (Asgari, Dasgupta, & Stout, 2012). These negative effects were only reversed when the leader was explicitly presented as being similar to the

participant, consistent with Mussweiler's selective accessibility model (Mussweiler, 2003; Mussweiler, Rüter, & Epstude, 2004).

Assimilation: inspiring effects. Although previous research has found evidence of contrast effects on women's self-related cognitions upon exposures to highly successful female role models, the opposite may also occur, an effect called assimilation. Indeed, under certain conditions, targets primed with a stereotype (Dijksterhuis et al., 1998) or a stereotypic exemplar (Osswald, Greitemeyer, Fischer, & Frey, 2010; Taylor, Lord, McIntyre, & Paulson, 2011) show behavioral assimilation, by behaving in ways consistent with the stereotype (e.g. better test performance after being primed with "professor", Dijksterhuis et al., 1998).

The idea of behavior assimilation was supported when we looked at the effects of highly successful female role models on women's *actual behavior* during a leadership task (Latu, Mast, Lammers, & Bombari, 2013). Male and female participants were asked to give a persuasive political speech in front of an audience in a virtual reality environment. While delivering the speech, participants were subtly primed either with the picture of a female political role model (Hillary Clinton or Angela Merkel), or the picture of a male political role model (Bill Clinton), or with no pictures. In a pretest, we insured that our participants perceived the male and female role models as similar on several dimensions such as liking, competence, and power. As a dependent measure, we assessed the length of our participants' speeches, as speaking time is a measure of empowered behavior, with powerful/dominant people tending to speak longer (Schmid Mast, 2002). We also videotaped participants and showed the videotaped speeches to an external coder who evaluated the quality of our participants' speeches, based on the structure and fluency of the discourse, but also nonverbal behaviors such as body posture and voice quality. After delivering the speech, we also asked participants to self-evaluate their performance using several items (e.g. "I was successful in communicating my message during the oral presentation"), using a 5-point Likert scale.

Results showed that when delivering a leadership task while being exposed to a male role model or no role models, we find a gender performance gap, with male participants speaking longer than women. However, exposures to female role models increased the length of women's speeches, thus eliminating the gender performance gap of empowered behavior. In fact, women's speeches were 24% longer when exposed to a portrait of Hilary Clinton and

49% longer when exposed to a portrait of Angela Merkel, compared to the average of the control conditions. Moreover, the longer women spoke the better they were evaluated by external coders and the more positively they self-evaluated their own performance. There was no significant difference between the two female role model conditions. Overall, these findings show that highly successful female role models empower women's actual behavior in a leadership task, and these inspiring effects are further reflected in women's self-evaluations.

Resolving the controversy. Overall, it seems that exposing women to counterstereotypical (successful) female leaders can sometimes reduce the negative effects of gender-leadership stereotypes through assimilation, but it can also have adverse effects, through contrast effects. How can these contradictory effects be explained? We will consider three possible explanations for these effects and discuss their implications for applied gender issues in male-dominated domains.

First, consistent with the selective accessibility model (Mussweiler, 2003), the extent to which social comparisons lead to assimilation vs. contrast depends primarily on whether individuals focus on similarities or differences with the target. If women exposed to highly successful female role models selectively focus on how they are similar to the female role model (e.g. sharing the same gender, nationality, career aspirations), then it is likely that they would be inspired by those role models through the process of assimilation. However, if women exposed to the same highly successful female role models selectively focus on how they are different from the female role model (e.g. different educational opportunities, socioeconomic status), then it is likely that they would be threatened by the role models through the process of contrast. Mussweiler and colleagues (Mussweiler et al., 2004) manipulated the similarity/difference focus in two ways. First, they manipulated the position of the standard (i.e. the role model) who was seen as either extremely or moderately successful. In this case, an extremely successful role model would be seen as less similar, thus eliciting contrast effects. Second, they manipulated the position of the self in relation to the standard – for example, by receiving positive feedback that would temporarily move one's self-views closer to the standard, thus eliciting assimilation effects.

The selective accessibility model was confirmed in the domain of successful female leaders by Asgari and colleagues' findings which showed that when focusing on similarities with the high-profile female leader (e.g. the female leader had ordinary beginnings or attended the

same university as the participants), exposures to such successful female role models had inspiring effects by increasing implicit associations between the self and leadership-related words such as leader, ambitious, powerful, achiever, and influential (Asgari et al., 2012). This model is also supported by work on mentorship (Lockwood & Kunda, 1997) which showed that when exposed to role models whose success seems attainable, female participants' self-views were inspired (self-enhancement), whereas when the role models' success seemed unattainable, female participants self-views were threatened (self-deflation). In future studies, participants should rate the extent to which women feel similar to the role model, in order to investigate directly whether women who see themselves as more similar to the role models also experience an inspiring effect, consistent with the selective accessibility model (Mussweiler, 2003).

From an applied perspective, these findings suggest that in order to successfully reduce the effects of negative stereotypes on women in leadership through exposures to role models, several steps need to be taken to insure a similarity focus. These strategies can include highlighting the dimensions on which highly successful female leaders are similar to other women with leadership aspirations, underscoring the fact that sustained effort and not exceptional luck explain female leaders' success, or framing success as being attainable by providing opportunities for contact between highly successful female leaders and women with leadership aspirations.

Although Mussweiler's selective accessibility model can explain many of the seemingly conflicting findings in this domain, it does not explain the inspiring effects that we have found in our research. Given that our role models were extremely successful (Hillary Clinton was the Secretary of State of the USA and Angela Merkel the chancellor of Germany), according to the selective accessibility model, we should have found a contrast effect due to a focus on dissimilarities. Thus, additional factors may be used to explain such contrasting findings.

A second factor which may help explain the conflicting effects of female role models' on women's leadership self-cognitions and behaviors is the element of visibility. In Latu and colleagues (2013), the role model was highly and permanently visible (photo hanging on the wall participants were facing during the leadership task). In most other studies, priming with female role models consisted of presenting either photos coupled with written biographical information about the model (Asgari et al., 2012; Hoyt & Simon, 2011; Rudman & Phelan,

2010), or exclusively written biographical information (Parks-Stamm et al., 2008). Importantly, this information was presented to participants before the assessment of leadership self-cognitions or the leadership task. It may be that, in order to be inspiring, female role models need to be continuously visible. This way, women may mimic the actual powerful nonverbal behaviors of the model (e.g. powerful body postures), which could, in turn, lead to more empowered behaviors and enhanced self-related cognitions. From an applied perspective, this finding would underscore the importance of not only having female role models in leadership, but of having visible female role models. Future studies should also establish if the positive effects of role model's visibility are due to role models' power or the mere presence of another female (in which case, exposures to visible female non-leaders would suffice to elicit inspiring effects).

A third factor that may account for the contradicting effects of female role models on women in leadership is the opportunity to succeed. In our study, women exposed to highly successful female role models were given the opportunity to actually perform a leadership task and prove their self-worth. In other studies (Parks-Stamm et al., 2008; Rudman & Phelan, 2010), women exposed to highly successful female role models were not necessarily given an opportunity to act, but immediately completed measures of self-valuations, self-stereotypes, or leadership aspirations. Thus, it is possible that when given the opportunity to act, succeed and feel good about their performance, women would derive their self-evaluations from their behavior during the task. This process would be consistent with the self-perception theory (Bem, 1972), according to which people infer their internal states (in this case self-evaluations) by observing their own behavior (in this case their performance on the leadership task). On the contrary, when there is no opportunity to act and experience domain-related success, women may merely engage in social comparison with the role model, leading to contrasting effects and thus negative effects on self-related cognitions and behaviors. From an applied perspective, this finding would have profound implications for women in leadership, suggesting the importance of giving women plenty of opportunities to act and prove their self-worth in leadership tasks and situations.

Practical Implementations

The current chapter offers several practical implementation suggestions. We suggest that in order for successful female role models to inspire women in leadership and reduce stereotype

threat, three conditions should be met. We propose that acknowledging and fostering these conditions in applied settings is key to women inspiring women. First, highly successful female role models should be seen as accessible and similar to women who aspire to be leaders, ideally through some form of contact that increases perceived similarity. Second, we recommend increasing the visibility of female role models in leadership contexts. Thus, increasing gender equality at the top is not only the goal, but it also becomes a source of inspiration for other women. Finally, we suggest that women need to be given and take themselves the opportunity to act and prove their self- worth in leadership settings.

Conclusions

Negative stereotypes of women in leadership are alive and well. Moreover, they are likely to affect the performance and self-related cognitions of women with leadership aspirations. Fortunately, several strategies have proved to be efficient in protecting women from the negative effects of stereotypes, including exposures to counterstereotypical women – women who have succeeded in leadership, thus disproving the stereotype. These findings show that increasing the number of women in top leadership positions is not only a goal of gender quality, but it can also become the engine that drives gender equality in male-dominated domains. However, given that exposures to highly successful female leaders can have unintended negative effects, it is important to understand the conditions under which women with leadership aspirations are best served and inspired by such incredibly successful women.

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