

Clearing the Air: Identity Safety Moderates the Effects of Stereotype Threat on Women's Leadership Aspirations

Paul G. Davies
University of California, Los Angeles

Steven J. Spencer
University of Waterloo

Claude M. Steele
Stanford University

Exposing participants to gender-stereotypic TV commercials designed to elicit the female stereotype, the present research explored whether vulnerability to stereotype threat could persuade women to avoid leadership roles in favor of nonthreatening subordinate roles. Study 1 confirmed that exposure to the stereotypic commercials undermined women's aspirations on a subsequent leadership task. Study 2 established that varying the identity safety of the leadership task moderated whether activation of the female stereotype mediated the effect of the commercials on women's aspirations. Creating an identity-safe environment eliminated vulnerability to stereotype threat despite exposure to threatening situational cues that primed stigmatized social identities and their corresponding stereotypes.

Any expensive ad is as carefully built on the tested foundations of public stereotypes or sets of established attitudes, as any skyscraper is built on bedrock.

—Marshall McLuhan, *Understanding Media: The Extensions of Man*

Stereotypes communicate to stigmatized individuals the accusations that specifically devalue their group's social identity. "African Americans, for example, are likely to be well aware that stereotypes accuse them of being intellectually inferior and aggressive; and women are well aware that stereotypes accuse them of being emotional, bad at math, and lacking leadership aptitude" (Crocker, Major, & Steele, 1998, p. 518). One factor that may play a critical role in the perpetuation of these stereotypes is TV commercials' persistent dissemination of stereotypic images. Although the explicit messages are intended to sell products, the

implicit stereotyping contained in TV commercials could have more global effects on the viewers' perceptions, beliefs, and attitudes (Pollay, 1986). Few people would contest the notion that the mass media continues to broadcast stereotypic images; however, the debate gets heated when discussing the potential effects of those images on consumers. But considering that the average American watches over 35 hr of TV a week, which translates into more than 37,000 commercials consumed per year, it is safe to conclude that TV commercials are a ubiquitous source of cultural information (Bretl & Cantor, 1988).

Some researchers have expressed concern over the implications of extensive exposure to gender-stereotypic media images. For example, Lovdal (1989) argued that simply viewing TV commercials can reinforce sex-role stereotypes. Correspondingly, Lavine, Sweeney, and Wagner (1999) suggested that commercials are a highly pervasive medium within which gender stereotypes can be formed, strengthened, and activated, and according to Elliot Aronson (1999), exposure to the mass media leads consumers to conclude that all women "prefer the laundry room to the boardroom" (p. 331). Despite these concerns over the consequences of being exposed to gender-stereotypic commercials, there has been remarkably little experimental research in this area. Geis, Brown, Jennings, and Porter (1984) conducted one of the few laboratory experiments on the effects of exposure to stereotypic commercials. Specifically, they examined whether stereotypic TV commercials could inhibit women's ambitions in life. They exposed female undergraduates to replicas of gender-stereotypic commercials or to replicas that reversed the gender roles. Thus, the stereotypic commercials portrayed dominant men and submissive women, whereas

Paul G. Davies, Department of Psychology, University of California, Los Angeles; Steven J. Spencer, Department of Psychology, University of Waterloo, Waterloo, Ontario, Canada; Claude M. Steele, Department of Psychology, Stanford University.

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Correspondence concerning this article should be addressed to Paul G. Davies, Department of Psychology, University of California, Los Angeles, 4643 Franz Hall, Box 951563, Los Angeles, CA 90095-1563. E-mail: davies@psych.ucla.edu

the counterstereotypic commercials portrayed dominant women and submissive men. Compared with women exposed to the counterstereotypic ads, women who viewed the stereotypic ads emphasized homemaking themes over personal achievement when describing their lives “10 years from now.” The researchers concluded from these data that implicit sex stereotyping contained in TV commercials could serve as an achievement script, which may inhibit women’s ambitions in life (Geis et al., 1984; see also Jennings, Geis, & Brown, 1980).

In the years since Geis and colleagues’ research, gender roles have continued to blur, yet there remains an unmistakable gender divide in certain domains—particularly in the domain of leadership (Stangor & Sechrist, 1998). Ragins and Sundstrom (1989) explained this gender disparity in leadership by arguing that the path to power for women contains numerous impediments and barriers, characterized by the researchers as an “obstacle course” (see Lyness & Thompson, 2000). Moreover, Morrison and Von Glinow (1990) argued that women encounter a “glass ceiling,” an invisible barrier of discrimination that restricts women’s access to elite leadership roles. Consistent with this notion, a recent survey revealed that women hold only 4% of all higher level leadership positions in Fortune 500 companies and a meager 0.6% of CEO positions (Catalyst, 1998). These disparities emerge despite the fact that numerous researchers have shown there are no pervasive sex differences in leadership effectiveness (e.g., Hollander, 1992; Powell, 1993).

Stereotype Threat

Any link between gender stereotypes and the gender divide in achievement-related choices is presumably multidetermined, which is reflected in the sophistication of the models that have proposed links between the two (e.g., Eagly, 1987; Eccles, 1994). Discussing all the possible links between gender stereotypes and women’s leadership aspirations is well beyond the scope of this article. Therefore, although acknowledging the complexity of this relationship, we focus on the role that stereotype threat plays in maintaining and exacerbating this gender divide.

When negative stereotypes targeting a social identity provide a framework for interpreting behavior in a given domain, the risk of being judged by, or treated in terms of, those negative stereotypes can evoke a disruptive state among stigmatized individuals. This situational predicament, termed *stereotype threat*, can undermine stigmatized individuals’ performance and aspirations in any targeted domain (Davies, Spencer, Quinn, & Gerhardstein, 2002; Spencer, Steele, & Quinn, 1999; Steele, 1997; Steele & Aronson, 1995; Steele, Spencer, & Aronson, 2002). Vulnerability to stereotype threat requires individuals to have knowledge of the stereotypes linked to their stigmatized social identities and the knowledge that they risk being personally reduced to those stereotypes in a given situation (see Steele et al., 2002). Because people all have social identities that are stigmatized in one situation or another, given the right social context, stereotype threat can potentially undermine performance and aspirations among any group. For example, men are vulnerable to stereotype threat in social contexts that require emotional sensitivity (Leyens, Désert, Croizet, & Darcis, 2000), and women are vulnerable to stereotype threat in traditionally masculine domains that allege a sex-based inability (J. Aronson, Quinn, & Spencer, 1998; Crocker et al., 1998; Davies et

al., 2002; O’Brien & Crandall, 2003; Schmader & Johns, 2003; Spencer et al., 1999; Steele, 1997; Steele et al., 2002).

If stereotype threat contributes to women’s deficits in traditionally masculine domains, then eliminating vulnerability to stereotype threat from those situations should reduce that gender disparity. Spencer et al. (1999) tested this hypothesis by manipulating the level of stereotype threat that their female participants experienced during a difficult math test. Half the participants were told the math test revealed no gender differences, whereas participants in the control condition were provided with no information regarding gender differences. Replicating the well-documented gender gap in math performance, women in the control condition underperformed compared with men. In the no-gender-differences condition, however, women’s performance deficit was completely eliminated; that is, women and men performed equally well on the difficult math test. These findings have been replicated using instructions that either told participants the math test was “nondiagnostic of ability” or provided no information regarding test diagnosticity (Davies et al., 2002). This research provides compelling evidence that removing vulnerability to stereotype threat from targeted domains can reduce underperformance among stigmatized individuals.

In stark contrast, research has also confirmed that priming individuals to think about their stigmatized social identities can expose those individuals to the insidious effects of stereotype threat in previously nonthreatening situations (Steele & Aronson, 1995). For example, Steele and Aronson (1995, Study 4) confirmed that having participants simply indicate their race immediately prior to a test exposed African Americans to the detrimental effects of stereotype threat on a nondiagnostic verbal test—a test previously shown not to elicit stereotype threat. “What this experiment shows is that mere cognitive availability of the racial stereotype is enough to depress Black participants’ intellectual performance, and that this is so even when the test is presented as not diagnostic of intelligence” (Steele & Aronson, 1995, p. 808). Steele and Aronson (Study 3) provided further evidence for this disruptive state when they discovered that African Americans confronting a diagnostic verbal test spontaneously activated the Black stereotype (e.g., *lazy, poor, welfare, token*, etc.) compared with African Americans confronting a nondiagnostic verbal test or Whites confronting either form of test. It is important to note that the African American participants who confronted the diagnostic test activated a general stereotype related to their stigmatized racial identity, not simply the academic-inability component of that stereotype.

Davies et al. (2002) conceptually replicated Steele and Aronson (1995) by exposing male and female participants to gender-stereotypic TV commercials immediately prior to a nondiagnostic math test—a test previously shown not to elicit stereotype threat. Exposure to the gender-stereotypic commercials resulted in activation of the female stereotype (e.g., *irrational, emotional, indecisive, weak*, etc.) among both female and male participants. Although both genders activated the female stereotype, only those participants for whom the stereotype was relevant to a stigmatized social identity (i.e., female participants) underperformed on the subsequent nondiagnostic math test. Furthermore, level of stereotype activation among the female participants mediated the performance-inhibiting effect of those commercials (Davies et al., 2002). It should be mentioned that none of the gender-stereotypic

commercials made any reference to math ability, nor did participants simply activate the math-inability component of the female stereotype. Davies et al. also established that exposure to these stereotypic commercials led women to avoid math items in favor of verbal items on a subsequent nondiagnostic aptitude test. Thus, like the work of Steele and Aronson, this research confirmed that priming individuals to think about a stigmatized social identity can expose them to stereotype-threat effects in situations that normally do not elicit stereotype threat (Davies et al., 2002).

Identity Safety Moderates Stereotype Threat

Every individual is a unique combination of countless social identities (e.g., gender, race, religion, nationality, career, etc.), and a social identity that is critical to an individual's functioning in one context can become meaningless in the next context (Branscombe, Ellemers, Spears, & Doosje, 1999; Brewer & Brown, 1998; Maalouf, 2001; Steele, 2002; Steele et al., 2002; Tajfel & Turner, 1979, 1986; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). The social identity that is most salient to an individual's functioning in a given situation is often determined by society's attitudes toward certain identities in that setting. For example, individuals often see themselves in terms of the social identity that is most stigmatized in a given situation (Branscombe et al., 1999; Maalouf, 2001; Steele, 2002; Steele et al., 2002). Steele and Aronson (1995) captured this phenomenon when they discovered that African American participants confronting a diagnostic test spontaneously activated stereotypes targeting their stigmatized racial identity. Many academic environments allege a race-based inability; thus, racial identity can be critical to an individual's functioning within academia—what Steele (1997) referred to as a “threat in the air.”

Previous stereotype threat research (see Davies et al., 2002; Steele & Aronson, 1995) discovered that the priming of stigmatized social identities exposed participants to stereotype-threat effects in targeted domains despite all efforts to remove threat from those situations (e.g., nondiagnostic instructions). Of course, people throughout their daily lives are bombarded by situational cues that are capable of priming various social identities that put them at risk of being devalued in various social contexts. Trying to eliminate all potentially threatening cues from targeted domains would be a futile exercise, but it may be possible to create environments that effectively reduce the risk of experiencing stereotype threat in those domains—despite the priming of stigmatized social identities and their corresponding stereotypes. These identity-safe environments would remove the “threat in the air,” enabling stigmatized individuals to enter previously threatening situations without the risk of being personally reduced to a negative stereotype targeting their social identity (Markus, Steele, & Steele, 2002; Steele, 2002; Steele et al., 2002). Consequently, varying the identity safety of a targeted domain should moderate whether stigmatized individuals are even vulnerable to stereotype threat. Creating these identity-safe environments involves assuring individuals that their stigmatized social identities are not a barrier to success in targeted domains—that is, assuring individuals that they are welcomed, supported, and valued whatever their background. Identity-safe environments challenge the validity, relevance, or acceptance of negative stereotypes linked to stigmatized social identities. Thus, the most effective identity-safe environments will not only be able to cope with primed stigmatized social

identities—they will embrace them (Markus et al., 2002; Steele, 2002; Steele et al., 2002).

Potential Mediators of Stereotype Threat

Stereotype threat, like many social-psychological effects, may have multiple mediational paths, and the mediational path that emerges may depend on the specific situation or social identity being investigated. For instance, progress has been made testing the following potential mediators of stereotype threat: *arousal anxiety* (e.g., Blascovich, Spencer, Quinn, & Steele, 2001; Leyens et al., 2000; O'Brien & Crandall, 2003; Osborne, 2001; Spencer et al., 1999; Stangor, Carr, & Kiang, 1998; Stone, Lynch, Sjomeling, & Darley, 1999), *evaluation apprehension* (e.g., J. Aronson et al., 1999; Spencer et al., 1999; Steele & Aronson, 1995), *expectancies* (e.g., Cadinu, Maass, Frigerio, Impagliazzo, & Latinotti, 2003; Kray, Thompson, & Galinsky, 2001; Leyens et al., 2000; Spencer et al., 1999; Stangor et al., 1998; Stone et al., 1999), *dejection* (e.g., Keller & Dauenheimer, 2003), and *working memory* (Schmader & Johns, 2003). The above mediational research has been commendable and continues to enrich understanding of stereotype threat, but the stereotype-threat paradigm still requires a foundation for reliable mediation and moderation. Considering that vulnerability to stereotype threat requires both knowledge of the stereotypes linked to threatened social identities and the knowledge that one risks being personally reduced to those stereotypes in targeted domains, it is proposed that level of stereotype activation should reliably mediate the effects of stereotype threat (Davies et al., 2002; Steele & Aronson, 1995; Steele et al., 2002). Because stereotype activation is a potential mediator of stereotype-threat effects only when stigmatized individuals are confronting a situation in which they risk being personally reduced to a negative stereotype targeting their social identity, varying the identity safety of the targeted domain should moderate whether stereotype activation mediates the effects of stereotype threat.

Beyond Performance Deficits

There has been a wealth of research demonstrating the broad consequences of stereotype threat on performance; in fact, over 100 studies have been published examining these performance deficits. Besides women in quantitative domains and African Americans in academic domains, some of the social identities and contexts that have revealed performance deficits include White men taking a test of natural athletic ability (Stone et al., 1999), men performing an affective processing task (Leyens et al., 2000), elderly people performing memory tasks (Levy, 1996), and people of lower socioeconomic status in France performing language-skills tasks (Croizet & Claire, 1998). In stark contrast to the abundance of research on performance, there has been a complete lack of research on how stereotype threat can influence the aspirations of stigmatized individuals (see Davies et al., 2002; Steele et al., 2002). This despite the fact that Steele has always spoken of the two-pronged consequence of stereotype threat—undermining both performance and aspirations among stigmatized individuals in targeted domains (Steele, 1992, 1997; Steele & Aronson, 1995; Steele et al., 2002). Accordingly, the present research moves beyond performance deficits to examine the insidious effects that stereotype threat can have on women's aspirations. Specifically,

we investigated whether vulnerability to stereotype threat can persuade women to avoid leadership roles in favor of nonthreatening subordinate roles.

Present Research

The present studies exposed participants to gender-stereotypic TV commercials designed to elicit the female stereotype. Study 1 investigated whether exposure to the stereotypic commercials could undermine women's aspirations on an impending leadership task. We suspected that varying the identity safety of that leadership task would moderate whether exposure to the stereotypic commercials undermined women's aspirations. Consequently, Study 2 explored whether creating an identity-safe leadership task could restore women's leadership aspirations despite the priming of a stigmatized social identity and its corresponding stereotypes. Furthermore, Study 2 used an implicit measure of stereotype activation to test whether exposure to the gender-stereotypic commercials would elicit the female stereotype and whether the resulting level of stereotype activation would mediate the effect of those commercials on women's aspirations. However, level of stereotype activation should predict aspirations only when women are vulnerable to stereotype threat. Thus, varying the identity safety of the leadership role should moderate whether activation of the female stereotype mediates the effect of the commercials on women's aspirations. More generally, despite exposure to threatening situational cues that prime stigmatized social identities and their corresponding stereotypes, varying the identity safety of a targeted domain should moderate whether a stigmatized group is even vulnerable to stereotype threat. These predicted findings, which would be the first to document moderated mediation in the stereotype-threat paradigm and the first to verify that susceptibility to stereotype threat in a targeted domain can be eliminated despite the priming of stigmatized social identities, would provide significant new insights into the process by which stereotype threat undermines both performance and aspirations among stigmatized individuals.

Study 1

Study 1 was designed to investigate whether vulnerability to stereotype threat could influence a woman's decision to be a leader or follower on an impending leadership task. As discussed above, leadership is viewed as a traditionally masculine domain where women are stereotyped as lacking ability. In fact, attitudes toward female leaders are most negative when the leadership role is particularly masculine in nature (Eagly, Karau, & Makhijani, 1995). Because leadership is a targeted domain, if the impending leadership task were perceived as being too masculine, just the prospect of assuming the leadership role would be threatening for women. As a consequence, we were faced with the challenge of developing a leadership role that would normally not elicit stereotype threat among women. That is, we were faced with the challenge of developing an innocuous task in a targeted domain, which is analogous to a nondiagnostic math test for women (Davies et al., 2002) or a nondiagnostic verbal test for African Americans (Steele & Aronson, 1995). To reduce women's apprehension without sacrificing men's interest, we portrayed the leadership task as relying heavily on interpersonal and communication skills for

success—domains in which women are not stereotyped as lacking ability.

Another challenge was to develop a subordinate role that would normally be as enticing as the leader's role. Considering that our participants are all students at a selective university, we assumed they would normally avoid anything labeled "subordinate" or "follower." Thus, we decided to refer to the followers as the "problem solvers." Overall, we hoped that after reading the description of the impending leadership task, both male and female participants would consider the leader role higher in status and masculinity than the problem-solver role.

Method

Participants and design. A total of 61 undergraduates (30 men, 31 women) at the University of Waterloo participated for credit in an introductory psychology class. Approximately equal numbers of men and women were randomly assigned to the $2 \times 2 \times 2$ mixed-model design, which had two between-participants factors (gender and commercial type) and one within-participants factor (role type). The dependent variable was the degree of interest indicated for the leader and problem-solver roles.

Materials. The six television commercials used in this study aired on major U.S. networks broadcast in Canada. The four advertisements viewed in the neutral-commercial condition did not advertise any gender-stereotypic products or companies, nor were any humans depicted in the commercials. The products and companies advertised in these commercials included a cellular phone, a gas station, a pharmacy, and an insurance company. The set of advertisements viewed in the stereotypic-commercial condition included the same four neutral commercials intermixed with two additional gender-stereotypic commercials. One of the stereotypic commercials portrayed a young woman who is so excited about being a consumer of a new acne product that she bounces on her bed with joy. The other portrayed a female college student who dreams of being the homecoming queen. None of the commercials used in the present research made any reference to leadership.

After watching their assigned set of commercials, participants read the following description of the alleged impending leadership task:

We would appreciate your participation in a study being conducted on the effectiveness of various leadership strategies. You can either choose to be a leader or a problem solver, but there will only be one leader assigned per group. Both the problem solvers and the leader will be given a written description of a series of complex problems to be solved. The leader, however, will also be supplied with the answers to those problems. It's the leader's job to guide the problem solvers to the solutions without explicitly telling them the answers. Previous research has demonstrated that the most effective leaders in these situations have the ability to facilitate cooperative interaction among the problem solvers, which requires excellent interpersonal skills; whereas the most effective problem solvers are good team players and have excellent communication skills.

After reading this description, participants were asked to indicate their degree of interest in assuming the leader and problem-solver roles. Participants indicated their interest for each role using a scale ranging from 1 (*no interest*) to 7 (*strong interest*).

Procedure. The same female experimenter ran both of the present studies. Prior to the participants reporting to the laboratory, she randomly chose one of two unmarked videos for the upcoming session. One video contained the neutral set of commercials, and the other contained the stereotypic set of commercials. The experimenter ran the participants in mixed-gender groups ranging in size from 2 to 5 people. As the participants arrived, they were informed that the experimenter was interested in testing their long-term memory of details contained in television commercials.

Ostensibly to achieve this goal, the experimenter asked the participants to watch a short video consisting of several commercials. Previous research has used this cover story and found that it ensures participants pay attention while viewing the commercials (Davies et al., 2002). The experimenter then turned on the television, cued the previously selected video on the VCR, and left the room. The first 10 s of both videos revealed only a blue screen, providing ample time for the experimenter to vacate the room prior to the start of the commercials. When the experimenter returned to the laboratory 3 min later, the commercials were finished, and both videos again revealed only a blue screen. This design enabled the experimenter to remain blind to the participants' condition throughout the study.

On her return to the laboratory, the experimenter informed the participants that approximately 20 min had to elapse before their long-term memory of the commercials could be accurately tested. To occupy those 20 min, the students were asked to voluntarily participate in a purported separate study being conducted on the effectiveness of various leadership strategies, which was allegedly being run by a different experimenter down the hall. All participants volunteered to take part in the leadership study. The participants were told that after reading the description of the task and indicating their role preference, they would join the other group of participants down the hall. This deception was used in both of the present studies to control for any unanticipated effects that might result from group composition (e.g., Fleischer & Chertkoff, 1986; Inzlicht & Ben-Zeev, 2000; Nyquist & Spence, 1986). Once the participants indicated their role preference, they were informed the experiment was over, thoroughly debriefed, and thanked for their participation. The debriefing sessions for both of the present studies included a check for suspicion, which confirmed that all participants still believed their memory for the details contained in the television commercials was being tested. Debriefing sessions also contained two manipulation checks: (a) The experimenter confirmed that participants who viewed stereotypic commercials realized they had been exposed to stereotypic portrayals of women, and (b) the experimenter confirmed that all participants had knowledge of the leadership-inability stereotype targeted at women.

Pretesting. To ensure there were no gender differences in role preference in the absence of our commercial-type manipulation, we pretested these materials on 40 male and female undergraduates. Results confirmed that both genders had a similar degree of interest in assuming the leader and problem-solver roles ($F_s < 1$). We also ran a subsequent pretest on 146 male and female undergraduates to ensure there were no gender differences in the perceived status or masculinity of each role, which was also confirmed ($F_s < 2$). This latter pretest also allowed us to examine whether the two roles were viewed as being distinct from one another with respect to their masculinity and status. Participants indicated "how traditionally masculine" they considered each role using a scale ranging from 1 (*not at all masculine*) to 7 (*completely masculine*) and the status of each role using a scale ranging from 1 (*very low status*) to 7 (*very high status*). Results established that the leader role ($M = 4.20$) was perceived as being more traditionally masculine than the problem-solver role ($M = 3.61$), $t(145) = 6.33$, $p < .001$. It was also established that the leader role ($M = 5.32$) was considered higher status than the problem-solver role ($M = 4.66$), $t(145) = 7.54$, $p < .001$.

Results and Discussion

Having established through pretesting that the two roles were normally equally appealing to both genders, we expected no differences in role preference for the neutral-commercial condition. In the stereotypic-commercial condition, however, we expected women to express less interest in the leader role and more interest in the problem-solver role. A three-way analysis of variance (ANOVA; Gender \times Commercial Type \times Role Type) on the preference data revealed a significant three-way interaction, $F(1,$

$57) = 4.45$, $p < .05$, with no other effects approaching significance ($F_s < 1.50$).

Because we expected our commercial-type manipulation not to affect men's role preferences, we broke down the above triple interaction by gender and separately analyzed the data for our male and female participants. As expected, a two-way ANOVA (Commercial Type \times Role Type) on the men's data revealed that no effects approached significance ($F_s < 1$). A two-way ANOVA (Commercial Type \times Role Type) on the women's data, however, revealed a significant two-way interaction, $F(1, 57) = 5.07$, $p < .05$.

Simple effects tests on the women's data revealed that women exposed to the neutral commercials, like men in either condition, expressed no clear preference for either role ($F < 1$). In contrast, women exposed to the gender-stereotypic commercials subsequently revealed a strong preference for the problem-solver role compared with the leader role, $F(1, 57) = 7.26$, $p < .01$. In addition, simple-effect tests also indicated that women in the neutral-commercial condition expressed more interest in the leader role than women in the stereotypic-commercial condition, $F(1, 57) = 4.70$, $p < .05$. The opposite pattern of interest was revealed for the problem-solver role; women in the stereotypic-commercial condition expressed more interest in the problem-solver role than women in the neutral-commercial condition, $F(1, 57) = 5.16$, $p < .05$ (see Figure 1).

Study 1 confirmed that exposure to gender-stereotypic commercials led women to express less interest in assuming the leader role and more interest in assuming the problem-solver role, whereas women exposed to the neutral commercials expressed no clear preference for either role—replicating data from the pilot study that did not expose participants to commercials. Study 1's findings are analogous to those of Steele and Aronson (1995) and Davies et al. (2002), which established that priming stigmatized social identities and their corresponding stereotypes can expose individuals to the insidious effects of stereotype threat in previously nonthreatening situations. Exposure to the stereotypic commercials in Study 1 undermined women's leadership aspirations on a previously innocuous leadership task. Pretests revealed that the leader role was perceived by both genders as being more traditionally masculine and of higher status than the problem-solver role. Consequently, women exposed to the stereotypic commercials used the preemptive strategy of avoiding the targeted domain of leadership to effectively sidestep the spotlight of stereotype threat.

Study 2

If stereotype threat is responsible for undermining women's leadership aspirations in Study 1, it follows that removing vulnerability to stereotype threat from the leadership task should restore women's interest in leadership despite exposure to the gender-stereotypic commercials. Thus, the objective of Study 2 was to investigate whether varying the identity safety of the leadership role would moderate the effects of the stereotypic commercials on women's leadership aspirations. Study 2 was also designed to help clarify the relationship between stereotype activation and stereotype threat. Stereotype activation is a potential mediator of stereotype-threat effects only when stigmatized individuals are confronting a situation in which they risk being personally reduced to a negative stereotype targeting their group (i.e., an identity-

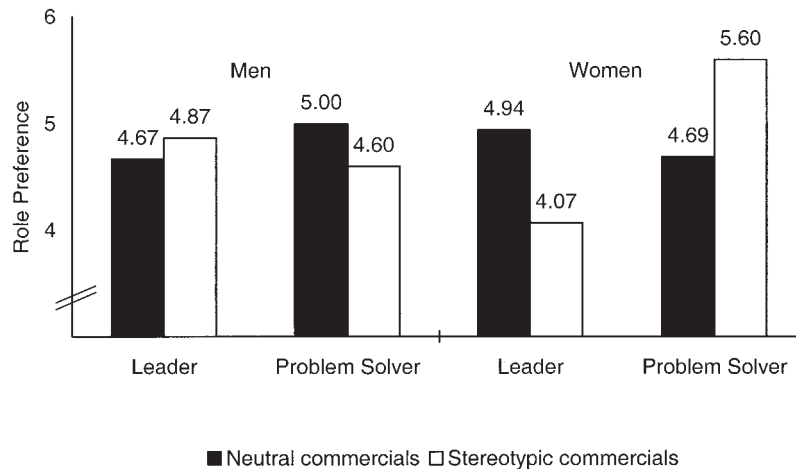


Figure 1. Leader or problem-solver preference as a function of gender and commercial type.

vulnerable situation). Consequently, we predicted that varying the identity safety of the leadership task would moderate whether stereotype activation mediated the effect of the commercials on women's aspirations. Previous research (Davies et al., 2002; Steele & Aronson, 1995) discovered that the priming of stigmatized social identities exposed participants to stereotype-threat effects in targeted domains despite all efforts to remove threat from those situations (e.g., nondiagnostic instructions). Thus, the predicted findings for Study 2 would be the first to document that it is possible to remove vulnerability to stereotype threat from targeted domains despite the priming of stigmatized social identities and their corresponding stereotypes.

Method

Participants and design. Participants were 116 undergraduates (58 men, 58 women) at the University of Waterloo who participated for credit in an introductory psychology class. Approximately equal numbers of men and women were randomly assigned to the $2 \times 3 \times 2$ mixed-model design, which had two between-participants factors (gender and testing condition) and one within-participants factor (role type). The dependent variables were degree of interest indicated for the leader and problem-solver roles and activation of the female stereotype as measured by a lexical-decision task.

Materials. We used the same commercial sets as those in Study 1. Immediately after watching their assigned commercials, the participants' activation of the female stereotype was measured using a lexical-decision task. After completing the lexical-decision task, participants were randomly assigned to read either the same description of the leadership task used in Study 1 (identity-vulnerable condition) or a modified version designed to eliminate women's vulnerability to stereotype threat (identity-safe condition). The modified version was identical to the description used in Study 1 with the exception of one additional identity-safe sentence: "There is a great deal of controversy in psychology surrounding the issue of gender-based differences in leadership and problem-solving ability; however, our research has revealed absolutely no gender differences in either ability on this particular task." Once they had read their assigned description of the leadership task, the participants were asked to indicate their degree of interest in assuming the leader and problem-solver roles using a scale ranging from 1 (*no interest*) to 7 (*strong interest*).

Assessing stereotype activation. The lexical-decision task requires participants to identify as quickly as possible whether letter strings flashed on

a computer screen are words or nonwords. The premise behind the lexical-decision measure is that participants for whom the female stereotype is activated should be quicker to recognize words related to that stereotype than participants for whom that stereotype is not activated. The task was conducted on Macintosh LC series computers programmed with SuperLab software (Cedrus Corporation, 1994). The stimuli were presented in the center of the screen as black words on a white background. Each letter string remained on the screen until the participant responded. The letter strings used for this lexical-decision task were words related to the general female stereotype, neutral words, and nonwords. The order of presentation for these letter strings was randomized for each participant.

The stereotypic words used in this study were generated during pretesting by students enrolled in an undergraduate psychology course at the University of Waterloo. The male and female undergraduates were each instructed to generate a list of adjectives to characterize the female stereotype. Individual lists were compiled, and the most frequently noted words were selected. The final 15 stereotypic words used in this study were *intuitive, gullible, irrational, wasteful, inferior, distracted, emotional, indecisive, tense, weak, helpful, gentle, kind, uncertain, and worried*. The 15 stereotypic words were then matched with neutral words of similar length and frequency on the basis of norms reported by Kucera and Francis (1967). The purpose of matching the stereotypic words with neutral words was to control for individual differences in reaction time, which was accomplished by using these matched neutral words as a covariate when analyzing the composite of stereotypic words (Davies et al., 2002; Kunda, Davies, Adams, & Spencer, 2002).

While investigating the pervasiveness of gender stereotypes 30 years ago, Broverman, Vogel, Broverman, Clarkson, and Rosenkrantz (1972) found that across sex, age, and educational level, people listed the following items as characteristic of the average adult woman: *emotional, gentle, subjective, easily influenced, passive, dependent, illogical, excitable in minor crises, unable to separate feelings from ideas, difficulty making decisions, dislike of math and science, not skilled in business, and rarely act as leaders*. Considering that the Broverman et al. study was conducted prior to the birth of any of the students who helped generate the list of adjectives in the present research, the similarity of the two lists illustrates not only the pervasiveness but also the tenacity of gender stereotypes.

Pretesting materials. To ensure that the addition of the identity-safe sentence did not change the perceived status or masculinity of either role, we pretested the identity-safe version of the leadership task on 43 male and female undergraduates. Participants indicated "how traditionally masculine" they considered each role using a scale ranging from 1 (*not at all masculine*) to 7 (*completely masculine*) and the status of each role using a

scale ranging from 1 (*very low status*) to 7 (*very high status*). Replicating pretest data on the identity-vulnerable version of the leadership task, results established that the leader role ($M = 4.47$) was still perceived as being more traditionally masculine than the problem-solver role ($M = 3.84$), $t(42) = 3.33, p < .01$. The leader role ($M = 5.02$) was also still considered higher status than the problem-solver role ($M = 4.30$), $t(42) = 3.46, p < .01$. These results confirmed that our identity-safety manipulation did not affect the perceived status or masculinity of either role on the leadership task.

Procedure. Before the participants arrived at the laboratory, the female experimenter randomly chose a number between 1 and 3 to determine the testing condition for each upcoming session. These numbers corresponded to three stacks of questionnaires and videos that were otherwise indistinguishable to the experimenter. This design enabled the experimenter to remain blind to the participants' condition throughout the study. In one condition, participants were exposed to the neutral commercials and given the identity-vulnerable version of the leadership task, replicating the neutral-commercial condition in Study 1. In the second testing condition, participants were exposed to the gender-stereotypic commercials and again read the identity-vulnerable version of the leadership task, replicating the stereotypic-commercial condition in Study 1. In the final condition, participants were exposed to the gender-stereotypic commercials and read the identity-safe version of the leadership task. Other than randomly choosing the testing condition number, however, the procedure for Study 2 was identical to Study 1 up to the point at which the female experimenter returned to the laboratory after the participants had viewed their assigned set of commercials.

After watching their assigned commercials, the participants were asked to participate in two "cognitive-busy" tasks, purportedly to fill time before their long-term memory for the commercials could be accurately tested. The first cognitive-busy task was actually the lexical-decision task designed to measure activation of the female stereotype, which only took 5 min to complete. At the time of the lexical-decision task, participants did not realize they were about to confront a leadership task. The second cognitive-busy task was the leadership task. This design allowed us to test whether exposure to gender-stereotypic commercials elicited the female stereotype and whether the resulting level of stereotype activation mediated the effect of those commercials on women's leadership aspirations. After the participants had read their assigned description of the task and indicated their interest in assuming the two roles, they were thoroughly debriefed and thanked for their participation.

Results and Discussion

Leadership aspirations. Compared with all other participants, women exposed to the gender-stereotypic commercials who read the identity-vulnerable version of the leadership task were expected to avoid the leader role in favor of the problem-solver role. Furthermore, male and female participants in the other two testing conditions were expected to reveal no preference for either role. A three-way ANOVA (Gender \times Testing Condition \times Role Type) on the preference data revealed a significant three-way interaction, $F(2, 110) = 4.51, p = .01$, with no other effects approaching significance ($F_s < 2$).

Because we expected our testing-condition manipulation not to affect men's role preference, we broke down this triple interaction by gender and separately analyzed the data for our male and female participants. As predicted, a two-way ANOVA (Testing Condition \times Role Type) on the men's preference data revealed that no effects approached significance ($F_s < 1$). In contrast, a two-way ANOVA (Testing Condition \times Role Type) on the women's preference data revealed a significant two-way interaction, $F(2, 110) = 5.66, p < .01$.

Simple effects tests on the women's data revealed that women in the stereotypic-commercial/identity-vulnerable condition expressed greater interest in the problem-solver role than the leader role, $F(1, 110) = 10.66, p < .01$, whereas women in the other two testing conditions revealed no role preference ($F_s < 1$). Additional simple effects tests also revealed that women in the stereotypic-commercial/identity-vulnerable condition expressed less interest in the leader role than women in the neutral-commercial/identity-vulnerable condition, $F(1, 110) = 7.47, p < .01$, or women in the stereotypic-commercial/identity-safe condition, $F(1, 110) = 6.24, p = .01$. The opposite pattern of results was found for the problem-solver role, for which women in the stereotypic-commercial/identity-vulnerable condition expressed more interest than women in the neutral-commercial/identity-vulnerable condition, $F(1, 110) = 4.78, p < .05$, or women in the stereotypic-commercial/identity-safe condition, $F(1, 110) = 3.60, p = .057$ (see Figure 2).

Stereotype activation. As measured by their recognition times for female stereotypic words on the lexical-decision task, it was predicted that participants who viewed the gender-stereotypic commercials would exhibit activation of the female stereotype compared with those participants who viewed the neutral commercials. To facilitate this analysis, the two testing conditions in which participants viewed the gender-stereotypic commercials were combined; these two conditions were still identical at the point of the lexical-decision task. Trials in which the participant responded incorrectly, or after the 2,000-ms time limit, were excluded from analyses (3.8% of trials), and trials in which the response time exceeded 2.36 standard deviations from the trial's mean response time (2.8% of trials) were also considered outliers and excluded from analyses (Van Selst & Jolicoeur, 1994).¹ There were no differences among conditions in numbers of errors or outliers (all $F_s < 1$).

A 2 (gender) \times 2 (commercial type) analysis of covariance was conducted on the participants' recognition time for stereotypic words, with the covariate being recognition time for matched neutral words to control for individual differences in reaction time (Davies et al., 2002; Kunda et al., 2002). The analysis of covariance revealed the predicted main effect for commercial type, $F(1, 110) = 9.48, p < .01$, but this main effect was qualified by a significant two-way interaction between gender and commercial type, $F(1, 110) = 3.70, p = .05$. Simple effects tests on the women's data revealed that exposure to the gender-stereotypic commercials led to activation of the female stereotype ($M = 717$ ms) compared with exposure to the neutral commercials ($M = 776$ ms), $F(1, 110) = 11.40, p < .01$. There was also a tendency for the men who viewed the stereotypic commercials ($M = 746$ ms) to activate the female stereotype compared with men exposed to the neutral commercials ($M = 760$ ms), although this tendency was not significant ($F < 2$).

Previous research using a lexical-decision task revealed that exposure to the gender-stereotypic commercials led to activation of the female stereotype among both men and women (Davies et

¹ These authors demonstrated, using Monte Carlo simulations, that the criterion used to identify outliers should be adjusted as a function of sample size so as to produce results that are unaffected by sample size, and they provided a table of recommended criteria for identifying outliers for samples of varying sizes.

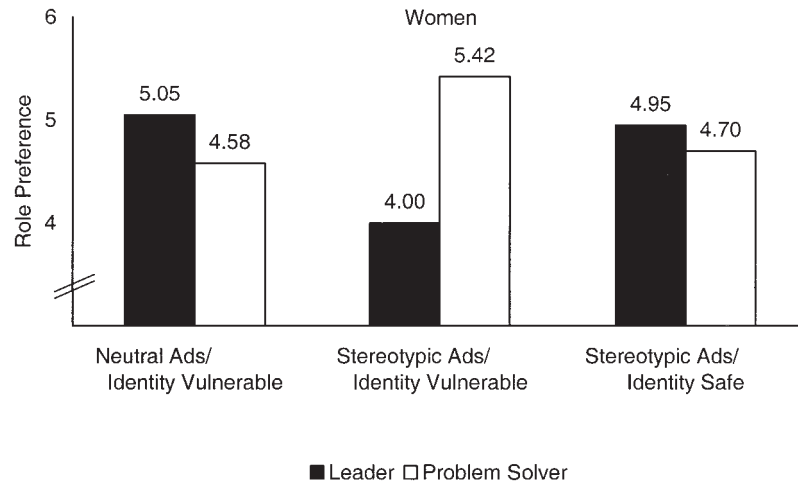


Figure 2. Leader or problem-solver preference among women as a function of commercial type and identity safety.

al., 2002); therefore, men's limited activation in the current study was not anticipated. The only difference between the current lexical-decision task and the previous lexical-decision task was the list of adjectives used. The earlier study (Davies et al., 2002), for simplicity, only used the first 10 adjectives from the 15-word set used in the current study. To determine if this discrepancy in the lists contributed to the discrepancy in men's activation level, we analyzed the current data using the original 10-word subset (i.e., *intuitive, gullible, irrational, wasteful, inferior, distracted, emotional, indecisive, tense, and weak*). We replicated our earlier findings when using this subset; that is, both men and women activated the female stereotype following exposure to the gender-stereotypic commercials.² Although this discrepancy in activation level is interesting, it is essentially irrelevant for the present research, because regression analyses confirmed that men's level of stereotype activation, whether using the 10-word subset ($\beta = -.11$, $t(55) = -0.82$, $p = .42$, or the entire 15-word set ($\beta = -.05$, $t(55) = -0.38$, $p = .70$, did not significantly predict their leadership aspirations. Consequently, the remaining analyses use the entire 15-word list of adjectives and focus exclusively on the women's data.

Moderated mediation. For these analyses, *leadership aspiration* was defined as the participants' degree of interest in assuming the leader role minus their degree of interest in assuming the problem-solver role.³ Once again, when analyzing the 15-word composite of stereotypic words, individual differences in reaction time were controlled for by using matched neutral words as a covariate (Davies et al., 2002; Kunda et al., 2002). Collapsing across the three testing conditions, women's level of stereotype activation strongly predicted their leadership aspirations ($\beta = .32$, $t(56) = 2.49$, $p < .05$). That is, increased stereotype activation (i.e., faster response time on lexical-decision task) predicted decreased leadership interest. The women's data, however, must be examined more closely, because we hypothesized that varying the identity safety of the leadership task would moderate whether stereotype activation would mediate the effect of the commercials on women's leadership aspirations. We tested these moderation and mediation hypotheses in turn.

Moderation. To test our moderation hypothesis, we conducted a series of regression analyses to determine whether our identity-safety manipulation influenced the predictive relationship between stereotype activation and leadership aspirations. On a dummy-coded variable, the single identity-vulnerable condition was given the value of 1, and the two identity-safe conditions were given the value of 0. Leadership aspiration was then regressed on stereotype activation, identity safety (1 or 0), and their interaction term. This regression analysis revealed the predicted interaction between identity safety and stereotype activation ($\beta = -.28$, $t(54) = -2.24$, $p < .05$). Furthermore, the analysis on women in the two identity-vulnerable conditions revealed that level of stereotype activation strongly predicted leadership aspirations ($\beta = .58$, $t(36) = 4.24$, $p < .001$). Among women in the identity-safe condition, however, that relationship between stereotype activation and leadership aspirations was completely eliminated ($\beta = -.05$, $t(18) = -0.20$, $p = .85$). Taken together, these analyses confirmed that our identity-safety manipulation moderated whether level of

² Using the 10-word list for the lexical-decision task, men exposed to the stereotypic commercials ($M = 771$ ms) activated the female stereotype compared with men exposed to the neutral commercials ($M = 820$ ms), $F(1, 110) = 4.38$, $p < .05$. Women exposed to the stereotypic commercials ($M = 759$ ms) also activated the female stereotype compared with women exposed to the neutral commercials ($M = 819$ ms), $F(1, 110) = 5.43$, $p < .05$.

³ To fully utilize our data in an efficient manner and to control for individual differences in response bias, we elected to define *leadership aspiration* as the participants' degree of interest in assuming the leader role minus their degree of interest in assuming the problem-solver role. In plain English, *leadership aspiration* was defined as how much more a person wanted to be a leader than a follower. It should be noted, however, that the within-cell correlations for women on these two dependent measures did not approach significance. Thus, degree of interest in assuming the leader role and degree of interest in assuming the problem-solver role could have just as easily been treated as two separate dependent measures for the moderated mediation analyses.

stereotype activation predicted leadership aspirations among women.

Mediation. To determine whether level of stereotype activation mediated the effect of the commercials on leadership, we examined the data from the two groups of women who read the same identity-vulnerable version of the leadership task but viewed different sets of commercials. Four separate regression analyses were conducted to determine whether level of stereotype activation among women in the identity-vulnerable conditions mediated the effect of the commercials on leadership aspirations (Baron & Kenny, 1986; Judd & Kenny, 1981). First, we conducted an analysis to determine if commercial type (coded as neutral = 0, stereotypic = 1) actually predicted leadership aspirations, which was confirmed ($\beta = -.49$), $t(36) = -3.38$, $p < .01$. Second, we established that commercial type predicted activation of the female stereotype ($\beta = -.46$), $t(36) = -3.08$, $p < .01$. Third, we examined whether stereotype activation (the potential mediator) predicted leadership aspirations when controlling for the effect of commercial type. Results confirmed that level of stereotype activation did in fact predict leadership aspirations ($\beta = .45$), $t(35) = 3.03$, $p < .01$. Fourth, and most crucially, we examined whether stereotype activation actually mediated the effect of commercial type on leadership aspirations. The amount of mediation is defined as the amount of reduction in the effect of commercial type on leadership aspirations when controlling for stereotype activation. When level of stereotype activation was controlled for in the analysis, the effect of commercial type on leadership aspirations dropped from $\beta = -.49$, $t(36) = -3.38$, $p < .01$, to $\beta = -.29$, $t(35) = -1.95$, $p > .05$. A Sobel test verified that this degree of mediation was indeed significant ($Z = -2.14$, $p < .05$). Taken together, these analyses confirmed that level of stereotype activation among women who read the identity-vulnerable version of the leadership task mediated the effect of the commercials on women's aspirations.

Study 2 allowed us to test whether exposure to the gender-stereotypic commercials elicited the female stereotype and whether the resulting level of stereotype activation mediated the effect of those commercials on leadership aspirations. Results confirmed that women who viewed the gender-stereotypic commercials activated the female stereotype compared with women who viewed the neutral commercials. More important, we also established that level of stereotype activation mediated the effect of the commercials on women's leadership aspirations. Level of stereotype activation, however, only predicted women's leadership aspirations in identity-vulnerable situations. When facing the identity-safe leadership task, which eliminated the risk of experiencing stereotype threat, women revealed the same leadership aspirations as men. That is, although the female stereotype had already been activated, the identity-safe description of the leadership task restored women's interest in leadership. Therefore, varying the identity safety of the leadership task moderated whether level of stereotype activation mediated the effects of the commercials on women's leadership aspirations. Study 2's findings, which are the first to document moderated mediation within the stereotype-threat paradigm, constitute a major advancement in our understanding of the process by which stereotype threat can undermine the aspirations of stigmatized individuals in targeted domains. Moreover, we discovered that vulnerability to stereotype threat in a targeted domain could be eliminated despite exposure to

threatening situational cues that prime stigmatized social identities and their corresponding stereotypes.

General Discussion

A wealth of research has documented how stereotype threat can undermine performance, but there has been a dearth of research investigating how stereotype threat can undermine the aspirations of stigmatized individuals. Consequently, the present research moved beyond performance deficits to examine the detrimental effects that stereotype threat can have on women's aspirations for power and status. By exposing participants to gender-stereotypic TV commercials prior to a leadership task, we investigated whether vulnerability to stereotype threat could persuade women to avoid leadership roles in favor of nonthreatening subordinate roles. Study 1 established that exposure to the stereotypic commercials undermined women's leadership aspirations on the impending leadership task. By varying the identity safety of that leadership task, Study 2 confirmed women's leadership aspirations could be restored despite exposure to the stereotypic commercials that primed stigmatized social identities and their corresponding stereotypes. That is, we discovered that identity-safe environments can eliminate vulnerability to stereotype threat in targeted domains, enabling individuals with stigmatized social identities to enter previously threatening domains without the risk of being devalued. Study 2 also verified that exposure to the gender-stereotypic commercials elicited the female stereotype among women, and the resulting level of stereotype activation mediated the effect of those commercials on women's aspirations. However, level of stereotype activation only predicted aspirations among women who were vulnerable to stereotype threat. Thus, we discovered that varying the identity safety of the leadership task moderated whether activation of the female stereotype mediated the effect of the commercials on women's leadership aspirations. In all previous stereotype-threat research, the deliberate priming of stigmatized social identities exposed participants to stereotype-threat effects in targeted domains that were normally nonthreatening (Davies et al., 2002; Steele & Aronson, 1995). The present research established, however, through the creation of identity-safe environments, that susceptibility to stereotype threat can be eliminated despite the priming of stigmatized social identities and their corresponding stereotypes.

It could be argued that our current findings represent nothing more than participants modeling the behavior of the female actors in the gender-stereotypic commercials. Supporting this contention, Bandura's social learning theory suggests that media models do have the power to influence the viewer's behavior (e.g., Bandura, Ross, & Ross, 1961). Although the stereotypic commercials make no reference to leadership, the results from Study 1 could potentially be explained in terms of modeling the less-than-inspirational behavior of the female actors. However, the results from Study 2 present more of a problem for this modeling counterexplanation. If our female participants were modeling the actors in the commercials, why would the identity-safe description of the leadership task completely eliminate the persuasive power of those media models?

Perhaps the stereotypic commercials simply primed traditional gender roles or achievement scripts among our male and female participants (e.g., Eagly, 1987; Geis et al., 1984)? Challenging this

alternative explanation is the fact that exposure to the stereotypic commercials only undermined leadership aspirations among women vulnerable to stereotype threat. Despite exposure to the stereotypic commercials in Study 2, interest in leadership was restored for those women confronting the identity-safe version of the leadership task. Recall that both men and women perceived the leader role as being significantly more masculine and higher in status than the problem-solver role, which was true for both the identity-safe and identity-vulnerable versions of the leadership task. Thus, if our gender-stereotypic commercials were simply priming traditional gender roles or achievement scripts, the identity-safe description of the task should not have restored women's interest in the significantly more masculine and higher status leadership role.

Ideomotor theory, which suggests that subtly primed stereotypes can sometimes lead automatically and unconsciously to stereotype-consistent behavior (e.g., Bargh, Chen, & Burrows, 1996; Dijksterhuis et al., 1998), provides another potential counterexplanation for our findings. In the ideomotor paradigm, the relevance of the stereotype to the target is immaterial; that is, all individuals cognizant of the primed stereotype are equally susceptible to ideomotor effects (see Wheeler & Petty, 2001). For example, Bargh et al. (1996) showed that undergraduates (i.e., young people) subtly primed with an elderly stereotype walked more slowly to an elevator. In the stereotype-threat paradigm, the relevance of the stereotype to the target is critical; that is, only individuals whose social identity is targeted by the stereotype are vulnerable to stereotype threat. In support of a stereotype-threat explanation for the present findings, only female participants were negatively affected by exposure to the gender-stereotypic commercials. In fact, participants for whom the primed stereotype was not relevant (i.e., men) revealed a tendency for boosted leadership aspirations—a phenomenon termed *stereotype lift* (see Walton & Cohen, 2003).

We believe that the current findings provide compelling new evidence for the role of identity safety in reducing stereotype-threat vulnerability in targeted domains. Some readers, however, may believe that the present studies simply replicate previous research showing that stigmatized individuals are immune to stereotype threat in targeted domains once pertinent stereotypes are made irrelevant through nondiagnostic instructions and the like. A key point of contention for these opposing views is whether or not pertinent stereotypes are spontaneously activated among some participants in nonthreatening conditions. As suggested throughout this article, we believe that people in nonthreatening environments do not spontaneously activate stereotypes pertaining to stigmatized social identities, but with so few stereotype-threat paradigms actually measuring stereotype activation, we cannot simply discount the opposing opinion. To the best of our knowledge, only one study can directly speak to this issue. Steele and Aronson (1995, Study 3) assessed stereotype activation after participants were exposed to their stereotype-threat manipulation (diagnostic vs. nondiagnostic instructions) and had attempted several difficult sample test questions. After completing those sample items, Steele and Aronson discovered that African American participants in the diagnostic condition spontaneously activated the Black stereotype, whereas African American participants in the nondiagnostic condition did not activate that stereotype, which suggests that participants in nonthreatening conditions do not spontaneously activate

stereotypes pertaining to stigmatized social identities. Of course this is just one study, and we cannot generalize from this seminal work to all subsequent stereotype-threat paradigms. To complicate matters, the present research and Davies et al. (2002) cannot directly speak to this issue, because level of stereotype activation was assessed after exposure to the commercials but prior to the participants realizing they were about to face a potentially threatening situation. It would have been informative for the present research to assess stereotype activation both before and after the participants read about the leadership task. Clearly, future research in this area would benefit greatly from timely measures of stereotype activation in all conditions.

Although the present research has established that varying the identity safety of a targeted domain moderates whether stigmatized individuals are vulnerable to stereotype threat, it also documented a short-term strategy used by those who are vulnerable to stereotype threat—avoiding the domain where one risks being personally reduced to a negative stereotype. Women vulnerable to stereotype threat avoided leadership in favor of nonthreatening subordinate roles; that is, they used the preemptive strategy of avoiding leadership to effectively sidestep the spotlight of stereotype threat. We believe that individual reactions to stereotype threat can range from these preemptive strategies (domain avoidance) to permanent strategies (domain disidentification). *Disidentification* is an adaptation strategy of eliminating a domain as a long-term basis of self-evaluation (Crocker et al., 1998; Major, Spencer, Schmader, Wolfe, & Crocker, 1998; Steele, 1992). This permanent adaptation strategy can therefore lead to systematic group differences between men and women in leadership aspirations and accomplishments. Regardless of whether the adaptation strategy is temporary or permanent, however, the resulting gender divide in leadership is often misinterpreted as reflecting some sort of gender-based inability.

Considering that individuals often see themselves in terms of the social identity that is most stigmatized in a given context (Branscombe et al., 1999; Maalouf, 2001; Steele, 2002; Steele et al., 2002), gender is likely to be a social identity that is critical to the functioning of women in leadership positions. These conditions can create a heightened state of vigilance among women in leadership roles (i.e., "threat in the air") as they search for situational cues to indicate whether or not their gender identity will be targeted in a given context. These situational cues can take numerous forms; they might be structural in nature (e.g., a boardroom filled with portraits of men), social in nature (e.g., an imprudent comment by a male colleague), and so forth. As we discuss above, trying to eliminate all potentially threatening cues from an environment would likely be a futile exercise. The present research, however, has discovered that it is possible to create leadership environments (i.e., identity-safe environments) that effectively reduce women's risk of experiencing stereotype threat—even in the face of threatening situational cues that prime stigmatized social identities and their corresponding stereotypes. These identity-safe environments enable stigmatized individuals to enter previously threatening situations without the risk of being personally reduced to a negative stereotype targeting their social identity. Within these identity-safe environments, the "threat in the air" is removed; thus, members of stigmatized groups are able to concentrate on fulfilling their potential rather than worry about fulfilling a negative stereotype. In short, identity safety clears the air.

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