

A Change Will Do Us Good:

Threats Diminish Typical Preferences for Male Leaders

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Abstract

The current research explores role congruity processes from a new vantage point by investigating how the need for change might shift gender-based leadership preferences. According to role congruity theory, favorability toward leaders results from alignment between what is desired in a leadership role and the characteristics stereotypically ascribed to the leader. Generally speaking, these processes lead to baseline preferences for male over female leaders. In this research, we propose that a shift in gender-based leadership preferences will emerge under conditions of threat. Because the psychological experience of threat signals a need for change, individuals will favor candidates who represent new directions in leadership rather than consistency with past directions in leadership. Specifically, we find that threat evokes an implicit preference for change over stability (Experiment 1) and gender stereotypes align women with change but men with stability (Experiments 2a and 2b). Consequently, the typical preference for male leaders is diminished, or even reversed, under threat (Experiments 3 and 4). Moreover, the shift away from typical gender-based leadership preferences occurs especially among individuals who highly legitimize the sociopolitical system (Experiment 4), suggesting that these preference shifts might serve to protect the underlying system.

KEY WORDS: ROLE CONGRUITY, GENDER STEREOTYPES, LEADERSHIP, THREAT, SYSTEM-LEGITIMIZING IDEOLOGIES

A Change Will Do Us Good:

Threats Decrease Typical Preferences for Male Leaders

It is a near truism that men, relative to women, are typically preferred as leaders; preferences for male leaders have been seen in politics, organizations, and businesses (e.g., Eagly & Carli, 2007). For instance, in a national sample the majority of individuals exhibited a baseline preference for a male over a female political candidate (Dolan, 2010). Such general preferences for male over female leaders have been explained by *role congruity theory* (Eagly & Karau, 2002), which posits that positivity toward leaders stems from the alignment of the desired qualities of the leader role with the characteristics that are stereotypically ascribed to the candidate. Generally speaking, the leader role is presumed to require agentic characteristics, and men are assumed to have these agentic characteristics to a greater extent than women. As a consequence, male candidates for leadership positions will be preferred to female candidates. However, role congruity theory also predicts that gender-based leadership preferences are malleable depending on the qualities that are desired in the leadership role. For example, leadership roles that are thought to require more communal characteristics tend to favor women, because women are assumed to have more communal characteristics than men (e.g., Eagly, Makhijani, & Klonsky, 1992). In the current research, we explore role congruity processes from a new vantage point by investigating how the desire for a leader who exemplifies change might shift gender-based leadership preferences. In particular, when things are going badly, a good leader will be one who can move the organization in a new direction.

In a series of studies, we provide evidence that the psychological experience of threat signals a need for change; thus, individuals under threat will favor candidates who represent a new direction for the leadership in the system over candidates who represent the "old" leadership in the system. Moreover, we provide evidence that gender stereotypes encompass beliefs about individuals' orientations to change and stability. Specifically, we propose that 1) a threat to the system evokes an

implicit preference for change over stability and 2) gender stereotypes explicitly and implicitly align women with change but men with stability. Consequently, the typical preferences for male over female leaders will be diminished, or even reversed, under a threat to the system.

Does Threat Signal a Need for Change in Leadership?

In general, times of crisis lead to a wide range of changes in political outcomes, including political party allegiances, voting behavior, and election results (e.g., Erikson, Mackuen, & Stimson, 2002; Fiorina, 1981). Parallel effects are found in the business world: When companies are performing poorly, outside managers are more likely to be appointed (Kaplan & Minton, 1994). The underlying reasons for these behavioral changes may stem from basic psychological responses to threats. A wide range of research and theory suggests that environmental threats elicit negative affect, signaling that something is wrong in the environment and needs to be fixed (e.g., Hallman & Wandersman, 1992; Oatley & Johnson-Laird, 1987; Schwarz, 2002; Schwarz & Clore, 2007). Moods thus function as information, and negativity in particular instigates processes to explain and ultimately redress the threatening stimulus (e.g., Schwarz & Clore, 1983). Consistent with these effects of threat is the finding that individuals' feelings of anxiety about political candidates are positively associated with learning about those candidates and reexamining traditional voting habits (Mackuen, Marcus, Neuman, & Keele, 2007; Marcus & Mackuen, 1993; Marcus, Neuman, & Mackuen, 2000). Conjoining naturalistic evidence that threat evokes change and basic emotion theory, we thus argue that situations of threat will lead individuals to seek a different course of action.

At first blush, such evidence of favorability toward change under threat may seem inconsistent with the predictions and findings of theories of system legitimacy. For instance, system justification theory argues that individuals are motivated to protect and defend the system (Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004). Similarly, social dominance theory posits that certain individuals are likely to

believe that some groups (i.e., men) are naturally superior to others (i.e., women) and that this hierarchy should be maintained (e.g., Pratto, Sidanius, Stallworth, & Malle, 1994). However, at times, the best way to protect the basic system – that is, the underlying principles, values, or practices of an organization – may be to seek change in leadership. A change in who fulfills a leader role can be effective in preserving the underlying social structure, which is the key motive for individuals who highly legitimize the system. For example, individuals in the U.S. may desire a change in Supreme Court justices based on their disagreement with a particular Court decision, but their underlying belief in the legitimacy of the Supreme Court is likely unshaken (e.g., Caldeira & Gibson, 1992; Gibson, Caldeira, & Spence, 2003). Within a business context, incorporating leadership outside of a firm can help to preserve companies that face challenges: Archival research has shown that better outcomes (i.e., avoiding bankruptcy or achieving successful reorganization after bankruptcy) are associated with companies whose boards include more members from outside the firm (Daily, 1995; Hambrick & D’Aveni, 1992). In some situations, then, the protection of the fundamental structure or system may ironically require favorability toward change in leadership. Nonetheless, given that previous theory and evidence might predict that threat will *decrease* preferences for change, we provide a direct test of this hypothesis in Experiment 1.

Do Gender Stereotypes Include Associations with Change and Stability?

In the current research, we investigate the hypothesis that gender stereotypes might include beliefs that link women with change but men with stability. One basis for this hypothesis stems from women's relative newcomer status in leadership positions, relative to men. For example, despite women's gains in recent years, men outnumber women in national, state, and local electoral office (Center for American Women and Politics, 2010), and men outnumber women in senior business leadership positions at Fortune 500 companies (Catalyst Census, 2008). Given that male predominance

in political and business leadership is the current status quo, male candidates represent a continuation of that status quo (i.e., stability), whereas female candidates represent a deviation from the status quo (i.e., change).

Another basis for the hypothesis that gender stereotypes will differentially associate women with change and men with stability is that the broader female gender stereotype includes a dimension of change that is absent from the male stereotype. Current-day stereotypes of women can be described as dynamic, in that they encompass beliefs that women today are different from women of the past or the future, whereas current-day stereotypes of men are static, in that they encompass relatively less belief that men have changed from the past or will change in the future (Diekmann & Eagly, 2000). In addition, the dynamic content of female gender stereotypes has been specifically documented with regard to political and occupational power: Perceptions of women included beliefs that they were increasing in occupational and political power over time, whereas perceptions of men included greater stability over time (Diekmann, Goodfriend, & Goodwin, 2004). For these reasons, we posit that gender stereotypes will differentially associate men with stability and women with change.

Implications for Gender-Based Leadership Preferences

The current research proposes that when a change is needed, gender-based leadership preferences may serve as a relatively simple way of endorsing such change or stability. Because women are less well represented across a wide range of leadership roles, men are likely to be seen as “typical” leadership candidates (e.g., Huddy & Capelos, 2002), and women are likely to be seen as “outsider” leadership candidates. When things go badly, constituents may seek out new leadership (e.g., an outsider candidate) and avoid the previous leadership (e.g., the typical candidate). Although women's atypicality as political leaders is usually seen as a liability, their very atypicality may be a benefit when a change to the system is needed.

The prediction that threatening conditions might decrease typical preferences for male over female leaders is consistent with the phenomenon of the “glass cliff effect” (Ryan & Haslam, 2007). Across both archival and experimental evidence, research on the glass cliff effect has demonstrated that organizational failure elicits preferences for female leaders over male leaders. For example, in an experimental manipulation of company performance, female leaders were preferred when company performance was declining, whereas male leaders were preferred when company performance was improving (Haslam & Ryan, 2008). In our research, we predict a similar effect within a broader role congruity framework. Here, what is desired in a leadership role might be influenced by the general psychological experience of threat, rather than solely threats that are specific to the organization. Moreover, consistent with the role congruity perspective, we argue that gender stereotypes about change and stability in leadership are relevant to both male and female leaders. Consequently, a need for change can steer perceivers *away* from male leaders as well as *toward* female leaders. In situations where change is a desirable aspect of a leadership role, women in particular may benefit, relative to men, if women are associated with new ways of leading.

Overview of the Current Research

In a series of studies, we examined whether the typical preference for male over female leaders is diminished under conditions of threat. First, we provide tests of two assumptions that ground our research. In Experiment 1, we test the hypothesis that threat leads to an implicit preference for change over stability. In Experiments 2a and 2b, we test the hypothesis that gender stereotypes explicitly and implicitly align change with women but stability with men.

Next, we turn to documenting the implications of these attitudes and stereotypes for gender-based leadership preferences. In Experiment 3, we examine whether threat diminishes the typical preference for male over female leaders. Finally, in Experiment 4, we test the hypothesis that system-

legitimizing motives underlie these effects by examining whether individual differences in legitimizing beliefs moderate the shift away from typical gender-based leadership preferences.

Experiment 1: Threat Elicits Implicit Preferences for Change Over Stability

Participants

One hundred seven psychology students (58 female, 83.18% European American, ages 18-22, median age = 19) from a midwestern university participated for partial course credit. An additional 8 participants were eliminated: 3 because of suspicion (i.e., they mentioned that the writing task influenced ratings), 1 for not following task instructions, and 4 for reporting being confused and annoyed.

Independent Variables

Variables were manipulated in a 2 (threat) × 2 (participant sex) between-subjects design.

Threat. Participants wrote for 7 minutes in response to threat or control prompts adapted from previous research (e.g., Landau et al., 2004; Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992; Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989). The threat manipulation (Landau et al., 2004), included the following prompts: "Please describe the emotions that the thought of the terrorist attacks on September 11, 2001, arouse in you" and "Write down as specifically as you can what happened during the terrorist attacks on September 11, 2001." The control condition included these prompts: "In the United States, people are currently watching a lot of television. Please think for a moment about watching television and the emotions that arise when you think about watching television" and "What specifically will happen to you when you watch television, and how will this affect you?"

The effectiveness of the threat manipulation was established in a pretest with a separate sample ($n = 93$) who wrote in response to the threat or control prompts and completed affect ratings

(PANAS; Watson & Clark, 1994). Participants in the threat condition ($M = 1.76$, $SD = 0.76$), relative to the control condition ($M = 1.41$, $SD = 0.52$), reported significantly more negative affect, $F(1, 90) = 6.43$, $p = .01$.

Measures

Implicit preferences for change. Participants completed an Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) in which they classified words in terms of the categories flexibility/stability and good/bad (Jost, Nosek, & Gosling, 2008). The category *flexibility* included the words *new*, *novelty*, *different*, *changing*, *shifting*, *fluctuate*, and *variable*, and the category *stability* included the words *familiar*, *steady*, *unchanging*, *same*, *enduring*, *fixed*, and *permanent*.

Participants completed the IAT in five blocks. Block 3 (classifying stability/bad or flexible/good) and Block 5 (classifying stability/good or flexibility/bad) were the critical blocks. Participants classified the words/pictures by pressing E (target corresponded with the left category heading) or I (target corresponded with the right category heading). Following the recommendations of Greenwald, Nosek, and Banaji (2003), trials with latencies of more than 10,000 ms were eliminated, and participants for whom more than 10% of trials had latencies less than 300 ms were eliminated. Each error was replaced with its block mean + 600 ms. IAT scores were calculated by subtracting block 3 from block 5 and dividing by the pooled standard deviation. Thus, higher numbers indicate an implicit preference for flexibility (i.e., participants were faster to associate flexibility/good and stability/bad than flexibility/bad and stability/good).

Suspicion check and demographics. Participants were asked to report their beliefs about the purpose of the experiment. As the final items, they were asked to report their sex, ethnicity, and age.

Results and Discussion

Implicit preference for change. IAT scores were submitted to a 2 (threat) × 2 (participant sex) between-subjects analysis of variance (ANOVA). As predicted, participants were more implicitly positive towards flexibility and implicitly negative towards stability in the threat condition compared to the control condition, $F(1, 95) = 3.83, p = .05$. In the threat condition, the implicit preference for change over stability differed from zero, $d = 0.16, t(46) = 2.52, p = .02$. In contrast, no implicit preference was detected in the control condition, $d = -0.01, t(49) = -.08, p = .94$. No other effects emerged.

Discussion. Experiment 1 provides support for one of our grounding hypotheses by documenting that an implicit preference for change increases under threat. Although no preference for flexibility or stability emerges under neutral conditions, a clear preference for flexibility (or avoidance of stability) emerges under threatening conditions. This experimental evidence provides a clear parallel to naturalistic evidence that individuals often seek some form of change as a response to crisis (Erikson et al., 2002; Fiorina, 1981).

The Experiment 1 findings suggest that a system threat can elicit favorability towards change. At first glance, this increased favorability toward change might appear to contradict the system justification theory prediction that individuals will especially adhere to the status quo under threat (e.g., Lau, Kay, & Spencer, 2008). However, we propose that these results are consistent with a more nuanced view of system justification theory, because system-legitimizing ideologies may lead individuals to favor change as a way to restore the organization to its previous health. One such route to restoration is to opt for leadership that will take the organization in a new direction; in Experiment 2, we examined whether women are particularly associated with such beliefs about change, whereas men are associated with beliefs about stability.

Experiment 2: Gender Stereotypes of Change/Stability

In Experiments 2a and 2b, we explore whether gender stereotypes differentially associate women with change and men with stability. Experiment 2a examines explicit stereotypes pertaining to beliefs about male and female leaders providing new direction to organizations, and Experiment 2b investigates implicit associations between the categories of male/female and change/stability.

Experiment 2a: Explicit Gender Stereotypes of Change and Stability

Participants

Fifty-three individuals (33 female, 61% European American, ages 18-65, median age = 37) were recruited online through Amazon's Mechanical Turk in exchange for payment.

Design

Our critical independent variables were dimension of leadership orientation (change or stability) and leader sex (male or female). Each participant rated items for each leadership dimension and leader sex, resulting in a 2 (dimension: change or stability) \times 2 (leader sex) within-subjects design.

Questionnaire: Beliefs about Change- and Stability-Oriented Leadership

Participants completed an online questionnaire about ideas about leadership. Embedded among filler questions were several questions about the likelihood of male or female leaders bringing change or stability in their leadership of government, business, or other organizations. Participants responded to all questions on scales ranging from 1 (*disagree strongly*) to 7 (*agree strongly*).

To control for any possible item effects, we administered two versions of the questionnaire that counterbalanced leader sex. Each item that was paired with a female leader in one version was thus paired with a male leader in the other version. Thus, each item was equally likely to be paired with a male or female leader. This counterbalancing reduces demand characteristics, because participants did not rate men and women on the exact same items, and it controls for any possibility that effects are due to wording of particular items.

Items were generated by the authors to have face validity for representing change or stability in leadership. Items were omitted from the scales if item-total correlations were below .20 (this resulted in one item being omitted from the change scale and three from the stability scale). Sixteen items were averaged to form the *change* scale (see Table 1 for full items; $\alpha = .80$). Eleven items were averaged to form the *stability* scale (see Table 1 for full items; $\alpha = .71$).

Suspicion Check and Demographics

Participants completed the same items as Experiment 1.

Results and Discussion

Data were analyzed in a 2 (stereotype dimension: change, stability) \times 2 (leader sex) \times 2 (participant sex) mixed ANOVA, with stereotype dimension and leader sex as within-subjects variables. Preliminary analyses that included the counterbalanced version of the questionnaire as an independent variable did not detect any systematic differences by counterbalancing version and leader sex; thus, the reported analyses are collapsed across counterbalancing version. In addition, preliminary analyses including participant age did not yield any significant moderation of the critical effects described below, suggesting that these beliefs are consensual across participant age.

Critical to our hypothesis is the Stereotypic Dimension \times Leader Sex interaction, $F(1, 50) = 66.29$, $p < .0001$. As predicted, female leaders were associated more with a change orientation than were male leaders, $F(1, 50) = 42.53$, $p < .001$, and male leaders were associated more with a stability orientation than were female leaders, $F(1, 50) = 63.13$, $p < .001$. Additionally, male leaders were associated more with stability than change, $F(1, 50) = 72.21$, $p < .001$, and female leaders were associated more with change than stability, $F(1, 50) = 38.53$, $p < .001$ (see Figure 1).

Two other significant effects emerged. First, the main effect of stereotypic dimension reflected that participants associated leaders more with stability ($M = 3.99$, $SD = 1.11$) than change ($M = 3.84$, SD

= 1.22), $F(1, 50) = 5.79$, $p = .02$. In addition, the Leader Sex \times Participant Sex interaction, $F(1, 50) = 6.34$, $p = .015$, reflected that female participants provided higher ratings of female than male leaders, $F(1, 32) = 7.24$, $p = .01$, but male participants did not show significant differences by leader sex, $F(1, 18) = 1.37$, $p = .26$.

Discussion. Experiment 2a demonstrated strong gender stereotypes about orientations toward change in leadership. Individuals believed that women are likely to provide a new direction in leadership, whereas men are likely to maintain consistency with past leadership. Additionally, these beliefs appear to be largely consensual; no moderation appeared either by participant gender or age. In Experiment 2b, we further investigated gender stereotypes by examining whether implicit associations align women with change but men with stability.

Experiment 2b: Implicit Gender Stereotypes of Change/Stability

Participants and Procedure

One hundred sixteen psychology students (58 female, 84.48% European American, ages 18-22, median age = 19) from a midwestern university participated for partial course credit.

All participants completed an IAT (Greenwald et al., 1998) that measured the associations between change/stability words and male/female faces. Participants then provided demographic information and completed a suspicion check.

Measures

IAT. Participants completed an IAT in which they classified words in terms of the categories change/stability and faces in terms of the categories male/female. The change/stability stimuli were drawn from Jost, Nosek, and Gosling's (2008) stability/flexibility IAT (used in Experiment 1); we modified the headers to be change/stability in order to remove the potential confound of gender stereotypes about physical flexibility. The faces, taken from the Faculdade de Engenharia Industrial¹ (FEI) database

(2006), were selected if they appeared to be about 30 years of age and of moderate attractiveness. All faces were converted to black and white images.

Participants completed the IAT in five blocks. Block 3 (classifying stability/female or change/male) and Block 5 (classifying stability/male or change/female) were the critical blocks. Participants classified the words/pictures by pressing E (target corresponded with the left category heading) or I (target corresponded with the right category heading). Following the recommendations of Greenwald, Nosek, and Banaji (2003), trials with latencies of more than 10,000 ms were eliminated, and participants for whom more than 10% of trials had latencies less than 300 ms were eliminated. Each error was replaced with its block mean + 600 ms. IAT scores were calculated by subtracting block 5 from block 3 and dividing by the pooled standard deviation. Higher scores indicate an implicit association between change and female faces or between stability and male faces (i.e., participants were faster to associate change/female and stability/male than change/male and stability/female).

Suspicion check and demographics. Participants completed the same items as previous experiments.

Results

Consistent with our hypothesis, the IAT revealed stereotypic associations between women/change and men/stability, $d = .09$, $t(113) = 2.81$, $p = .006$, compared to zero. In addition, a one-way ANOVA testing the effect of participant sex revealed that these stereotypic associations were held more strongly by men, $d = .22$, than women, $d = -.03$, $F(1,112) = 16.48$, $p < .001$.

Discussion

Together, Experiments 2a and 2b provide support for the hypothesis that gender stereotypes align women with change but men with stability. Experiment 2a found that women are believed to facilitate a changed direction in leadership, whereas men are believed to maintain consistency with past

leadership. Moreover, these explicit stereotypes were consensual across participant sex and a wide range of participant ages. Furthermore, Experiment 2b provided evidence that women are implicitly associated with change and men are implicitly associated with stability, although this implicit stereotype was manifested by men in particular.

Experiments 1 and 2a/b thus provide critical evidence for our two grounding hypotheses. First, under experimental manipulations of system threat, relative to a control condition, individuals show relatively more implicit favorability toward change and less implicit favorability toward stability. Second, gender stereotypic beliefs hold that women in particular are associated with change. These two pieces of evidence thus lead to the critical hypothesis that under system threat, the typical preference for male over female leaders will be diminished or even reversed. In Experiment 3, we test this prediction.

Experiment 3: Threat Decreases the Typical Preference for Male Candidates

To explore the hypothesis that system threat decreases the typical preference for male over female leaders, participants were randomly assigned to a threat elicitation condition or a control condition, and then they evaluated either a male or a female candidate for a leadership position.

Method

Participants and Procedure

Eighty-eight psychology students (38 female, 70.45% European American, ages 18-25, median age = 19) from a midwestern university participated for partial course credit.

Variables were manipulated in a 2 (threat) \times 2 (candidate sex) \times 2 (participant sex) between-subjects design. Participants responded to the same suspicion check and demographic items as previous experiments.

Threat. Participants wrote for 7 minutes in response to threat or control prompts adapted from previous research (Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992; Rosenblatt, Greenberg,

Solomon, Pyszczynski, & Lyon, 1989). The control prompt was the same as Experiment 1. To increase generalizability, we altered the threat manipulation from that used in Experiment 1 so that participants wrote about threats in their local community. The threat elicitation thus posed the following prompt: “The University is currently facing many different challenges. Please think for a moment about these different challenges and the emotions that arise when you think about them. For example, you might think about economic instability, violent crime, or job cuts” and “What specifically will happen to the University when these problems occur, and how will this affect you?”

The effectiveness of the threat manipulation was established in a pretest in which participants in a separate sample ($n = 26$) were randomly assigned to the threat or control condition and then completed a word-stem completion task. The critical word fragments were c __ s __ s; n _____ s; f __ ght; fe __; pa __ __; th __ __ t; conc __ __; an __ __ __ s, which could be completed to form *crisis*, *nervous*, *fright*, *fear*, *panic*, *threat*, *concern*, and *anxious*. The number of threat words completed reflected the accessibility of threat (e.g., Landau et al., 2004; Steele & Aronson, 1995). Confirming the effectiveness of the threat manipulation, participants in the threat condition ($M = 1.77$, $SD = 0.93$), relative to the control condition ($M = 1.00$, $SD = 0.82$), completed more threat words, $F(1, 24) = 5.04$, $p = .03$.

Candidates. Participants read about either a male or female candidate (Brian or Karen Johnson²) for the ostensible position of Director of Safety at the university. Specifically, participants read the following vignette: “Karen [Brian] Johnson is a candidate for Director of Safety at Miami University. In her [his] application she [he] has expressed that if she [he] is chosen for this position she [he] will fight to increase the lighting on campus; increase the number of police officers patrolling the campus at night; overall, make the university a safer campus for students, faculty, and administration.” In order to reinforce the manipulation, gendered pronouns (he/she or his/her) were repeated seven times in the

task instructions (for a similar manipulation of candidate sex, see Eagly, Diekmann, Schneider, & Kulesa, 2003).

Dependent Measures

Voting. The *voting* measure consisted of the average of two items assessing how likely participants would be to *support* and *vote for* the candidate ($\alpha=.87$). Items were completed on scales ranging from 1 (*not at all*) to 7 (*extremely*).

Results

The voting index was submitted to a 2 (threat) \times 2 (candidate sex) \times 2 (participant sex) ANOVA.

As hypothesized, the critical Threat \times Candidate Sex interaction emerged, $F(1, 79) = 4.52, p = .04$. As shown in Figure 2, in the control condition, the typical tendency to prefer a male candidate relative to a female candidate emerged, $F(1, 40) = 4.00, p = .05$, whereas in the threat condition, no difference was detected, $F(1, 39) = 1.09, p = .30$. This diminished preference for male candidates over female candidates was primarily driven by decreased support for a male candidate in the threat versus the control condition, $F(1, 40) = 4.01, p = .05$; support for a female candidate was not affected by condition, $F(1, 39) = 1.08, p = .30$. No other effects emerged.

Discussion

Experiment 3 provided evidence that under threat, typical gender-based leadership preferences disappear. Although participants in a control condition preferred male to female candidates, participants under threat did not show this preference. Indeed, preferences for male candidates significantly dropped under threat, relative to a control condition. Thus, consistent with our hypothesis and with previous findings of the glass cliff effect, a system threat can lead to relative detriments for a male candidate (and, by the same token, relative benefits for a female candidate).

Thus far, our experiments have shown that threat can shift preferences toward greater favorability toward change (Experiment 1), and that gender stereotypes align women with change but men with stability (Experiments 2a and 2b). Experiment 3 then demonstrated that the experience of threat can diminish the typical preference for male leaders, relative to female leaders. This evidence thus suggests that both motivation (desire for change) and cognition (gender stereotypes) underlie diminished gender-based leadership preferences under threat. However, a key piece of evidence still important to the motivational framework is to demonstrate that the relative disadvantage for male versus female leaders under threat functions at least in part to maintain the current system. If, as we contend, the shift away from typical leader preferences under threat stems from the motive to defend the underlying system, then this effect should be particularly apparent among those who highly endorse system-legitimizing beliefs.

Experiment 4: Moderation of Gender-Based Leader Preferences Under Threat

Especially Appears for High System Legitimizers

In our final experiment, we examined moderation of the effect of threat on gender-based leadership preferences by individual differences in ideologies that support the status quo (i.e., system justification, Kay & Jost, 2003; social dominance orientation, Pratto et al., 1994). If, as we contend, threat evokes a shift away from typical gender-based leadership preferences in service of preserving the underlying social structure, then this shift should be especially apparent among those who strongly legitimize the current sociopolitical system. Certainly, this hypothesis is a conservative test of our predictions, because highly-legitimizing individuals may also be those who are most likely to endorse sexist attitudes (e.g., Pratto et al., 1994). Nonetheless, if the defense of the system underlies the relative positivity toward female leadership candidates under threat, it is highly-legitimizing individuals in particular whose evaluations should reflect this pattern.

Method

Participants

One hundred twenty-one psychology students (80 women; 76.67% European American; ages 18-22; median age = 18) participated in two sessions with data matched across sessions. All participants received partial course credit for participation. An additional 9 participants were eliminated for suspicion (e.g., they reported that the experiment was about stereotypes and bias).

Procedure and Materials

At the beginning of the semester, participants completed the ideology measures in a departmental mass survey session. Approximately 2-12 weeks later, participants completed the experimental manipulation of threat described in Experiment 1. Afterwards, participants read about a candidate for the State House of Representatives and completed the voting measure ($\alpha = .90$), demographics questions, and suspicion check used in previous experiments. Variables were thus manipulated in a 2 (threat) \times 2 (candidate sex) \times 2 (participant sex) between-subjects design.

Legitimizing ideology. Embedded among other questionnaires within the mass survey session were the critical measures of individual differences in legitimizing ideology. The *social dominance orientation* (SDO) scale (Pratto et al., 1994) consisted of 14 statements (i.e., "Increased social equality") that participants rated on scales ranging from 1 (*very negative*) to 9 (*very positive*). Items were averaged to create a social dominance orientation index ($\alpha = .85$).

The measure of system justification (SJ) beliefs (Kay & Jost, 2003) consisted of 8 statements (i.e., "In general, the American political system operates as it should") that participants rated on scales ranging from 1 (*strongly disagree*) to 9 (*strongly agree*). Items were averaged to create a system justification index ($\alpha = .81$).

Candidates. Participants read about either a man or woman (Brian or Karen Johnson) who was a candidate for the House of Representatives in the state of Ohio. Participants read the following: “Karen [Brian] Johnson is a candidate for the House of Representatives in the state of Ohio. In her [his] campaign, she [he] has expressed that as a leader she [he] will fight to reduce taxes; create new jobs for the state of Ohio; make Ohio a better place to live for all of its citizens.” In order to reinforce the manipulation, gendered pronouns (he/she or his/her) were repeated seven times in the task instructions (for a similar manipulation of candidate sex, see Eagly, Diekmann, Schneider, & Kulesa, 2003).

Results and Discussion

All significant effects involving threat are reported in the text; for brevity, marginal or less relevant effects are footnoted.

Replication of the moderation of leader preferences under threat. The voting measure was submitted to a 2 (threat) × 2 (candidate sex) × 2 (participant sex) ANOVA. As predicted, the significant Threat × Candidate Sex interaction emerged, $F(1, 112) = 5.84, p = .02$. Under threat, participants preferred a female over a male candidate, $F(1, 55) = 5.50, p = .02$, whereas control participants did not show a preference, $F(1, 57) = 1.26, p = .27$. Moreover, greater support was found for a female candidate under threat than in the control condition, $F(1, 61) = 10.16, p = .002$, whereas support for a male candidate was not affected by threat, $F(1, 51) = 0.22, p = .64$.³ These findings thus replicate Experiment 3's finding that threat moderates gender-based leadership preferences.

Moderation by legitimizing ideologies. We then examined whether those who most legitimize the current system especially show reversed gender-based preferences under threat. We categorized those who were above the median on both SDO and SJ as “high legitimizers,” and those who were below the median in both SDO and SJ as “low legitimizers.” As a result, 71 participants were retained in these analyses.

To examine whether high versus low legitimizing ideology would moderate the Threat \times Candidate Sex interaction, we conducted a 2 (threat) \times 2 (candidate sex) \times 2 (legitimizing ideology: high/low) between-subjects ANOVA.

For the voting measure, the predicted Threat \times Candidate Sex \times Legitimizing Ideology interaction was significant, $F(1, 63) = 4.31, p = .04$.⁴ For those low in legitimizing ideologies, the Threat \times Candidate Sex interaction did not emerge, $F(1, 35) = 0.05, p = .82$ (see Figure 3). However, for those high in legitimizing ideologies, the Threat \times Candidate Sex interaction was highly significant, $F(1, 28) = 12.88, p = .001$: Participants in the threat condition strongly preferred a female relative to a male candidate, $F(1, 13) = 9.70, p = .008$, whereas participants in the control condition marginally preferred a male relative to a female candidate, $F(1, 15) = 3.77, p = .07$. Furthermore, support for a female candidate increased in the threat versus the control condition, $F(1, 13) = 10.11, p = .007$; in contrast, support for a male candidate was not affected by threat, $F(1, 15) = 2.44, p = .14$.

Discussion. Experiment 4 provided additional evidence that threat moderates typical gender-based leadership preferences. In essence, threat results in relative benefits for female candidates and relative detriments for male candidates. More importantly, this experiment provided evidence that the reversal in typical gender-based preferences is particularly apparent among those most motivated to defend the underlying sociopolitical system. Participants who strongly legitimized the system especially reported greater favorability toward a female candidate over a male candidate under conditions of threat, compared to a control condition. Indeed, shifts in gender-based leadership preferences under threat did not emerge among participants who did not strongly legitimize the system. This pattern is especially intriguing because those individuals most likely to show gender-nontraditional preferences under threat are those who generally would be expected to hold the most gender-traditional attitudes

and beliefs. These findings thus suggest that the moderation of gender-based preferences occurs at least partly in service of bolstering the underlying sociopolitical system.⁵

General Discussion

The research presented here provides new evidence detailing that threat can lead to a preference for a change in leadership, and that female leaders in particular might benefit (and male leaders might suffer) as a result of these preferences. Consistent with role congruity theory (Eagly & Karau, 2002), positivity toward leaders stemmed from the alignment between qualities desired in a leadership role and the gender-stereotypic characteristics of the leadership candidate. Across these studies, we provided evidence supporting each of our hypotheses. We demonstrated that threat increases implicit preferences for change (Experiment 1) and that gender stereotypes explicitly and implicitly link women with change and men with stability (Experiments 2a and 2b). Most critically, we provided evidence that threat leads to the moderation of gender-based leadership preferences. Under threat, typical preferences for male leaders were diminished or reversed, whether that occurred through equalized support for male and female candidates (Experiment 3) or greater support for female than male candidates (Experiment 4). Furthermore, we found that the effect of threat on gendered leadership preferences particularly emerged for individuals who highly legitimize the current system (Experiment 4). This finding thus provides compelling evidence that the shift away from typical gender-based leadership preferences under threat can function in service of protecting the system.

A New Dimension of Gender Stereotype Content: Change and Stability

The current research provides empirical support for the idea that women may be preferred under failure because they are thought to bring organizational change, consistent with previous research on the glass cliff phenomenon (e.g., Ryan & Haslam, 2007). A valuable contribution of the current research is the novel demonstration that the dimensions of change and stability are potentially

important dimensions of gender stereotypes. In particular, female leaders are thought to bring change to organizations, whereas male leaders are thought to continue with existing patterns of leadership. Importantly, these stereotypes are robust across participant gender and age, suggesting strong consensus. Furthermore, implicit associations reflect beliefs that associate women with change and men with stability. A potentially interesting discrepancy between explicit and implicit stereotypes is that the implicit associations were held particularly by men, whereas both men and women endorsed explicit stereotypes of change and stability. Future research might examine the causes and the consequences of gender similarities in explicit beliefs but gender differences in implicit associations. In addition, future research might focus on the types of change that respondents envision. Specifically, women might bring change in terms of leadership style, the political issues that they support, or even specific personality characteristics essential for organizational change. Further documentation of the content of these stereotypes, and their implications for observers' attitudes and decisions, would help to delineate this dimension of gender stereotypes.

Although these experiments document one domain in which change/stability gender stereotypes are impactful, additional research should examine the consequences of these stereotypes for other domains. In particular, situations that call for stability or maintenance of tradition might especially favor male leadership but disfavor female leadership (just as business contexts emphasizing stability and tradition favor older over younger candidates, Diekmann & Hirnisey, 2007). In addition, women are but one example of a group who is underrepresented in leadership positions. Future research could fruitfully examine whether membership in other underrepresented groups is associated with change rather than stability, as well as the implications of those group-based stereotypes. For example, stereotypes of Black politicians differ in content from the general category of politicians (Schneider & Bos, in press). These perceived differences between Black politicians and politicians in

general might thus lead people to infer that Black politicians will bring new direction for leadership. An anecdotal example consistent with this hypothesis is that the Obama 2008 campaign's message of "change" might have had larger purchase simply because of his minority status. Certainly, these questions lead to interesting paths for future empirical tests.

Change Can Ironically Serve to Protect the Status Quo

An intriguing finding from this research is that the psychological experience of threat can elicit preferences for change over stability. These studies are the first, to our knowledge, to document that a system threat heightens such preferences for change. Moreover, it is clear from Experiment 4 that the seeking of a change-oriented leader is actually in service of system maintenance. Indeed, it was only individuals who highly legitimized the system who showed moderation of leadership preferences under threat. These findings uphold and expand theories of system legitimacy: Individuals who are motivated to protect the system are those who are especially likely to modify their attitudes in ways that will serve the system.

Especially counterintuitive is the finding that those who typically uphold the traditional gender hierarchy are also those most likely to express greater positivity for female than male leadership candidates – in essence, to subvert the gender hierarchy. This response may demonstrate the primacy of the motive to protect the underlying principles, values, or practices of the organization, even if that means opting for less traditional leadership of that system.

Conclusions

These experiments illustrate that threat can shape leadership evaluations in counterintuitive ways. A threat to the system can cue that a change in leadership needs to occur. Because men are associated with stability and women with change, threat can elicit a surprising disadvantage for male leadership candidates and advantage for female leadership candidates. Simply put, when a change is

needed, being a female candidate may prove to be a benefit, whereas being a male candidate may prove to be a liability.

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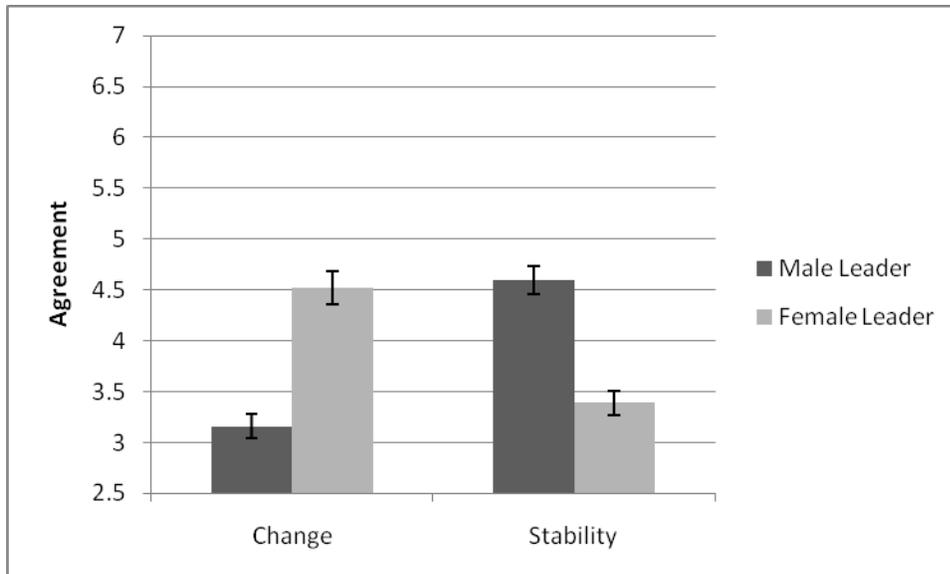
Table 1. Beliefs about Change and Stability Orientations in Leadership: Experiment 2a

Change	Stability
I believe that female leaders do things differently than the routine ways of leading.	When an organization needs to maintain strength, I would probably support a male over a female leader.
Female leaders are more likely than male leaders to move organizations in a new direction.	I think that male leaders represent "more of the same."
One of the strengths of female leaders is that they bring a new perspective to leadership positions.	I think men tend to lead in familiar ways.
When an organization needs a change in direction, it is smart to turn to female leaders for their ideas.	When a man enters a leadership position, he is likely to keep an organization going on the same track as it was before.
For a different take on a problem, it would be better to consult a woman than a man.	Men are likely to uphold traditional ways of doing business.
Female leaders are more likely than male leaders to have ideas that are new and different.	Men's ways of leading are likely to be consistent with how things have always been done before.
Female leaders are more likely than male leaders to bring new ideas to the table.	Male leaders tend to stick with traditional ways of leading.
Women bring a fresh perspective to leadership positions.	Men have a very familiar leadership style.
When an organization needs a different take on a problem, it's a good idea to ask female leaders what they think.	When I think about stability in leadership, I am more likely to think of men.
Female leaders tend to lead in nontraditional ways.	Male leaders are a "safer choice" than female leaders.
Female leaders bring a unique perspective to organizations.	Men are the voice of experience in politics.
When I think of leaders who are "new and different" I am more likely to think of women.	
Female leaders provide a "breath of fresh air" to leadership positions.	
When a group needs a change, I would probably support a female over a male leader.	
Female leaders are more likely to lead in a new direction than male leaders.	
Female leaders are a "riskier choice" than male leaders.	

Note. The stereotypic versions are presented here; however, target sex was counterbalanced across questionnaire versions, so that each item appeared with both men and women as the target sex.

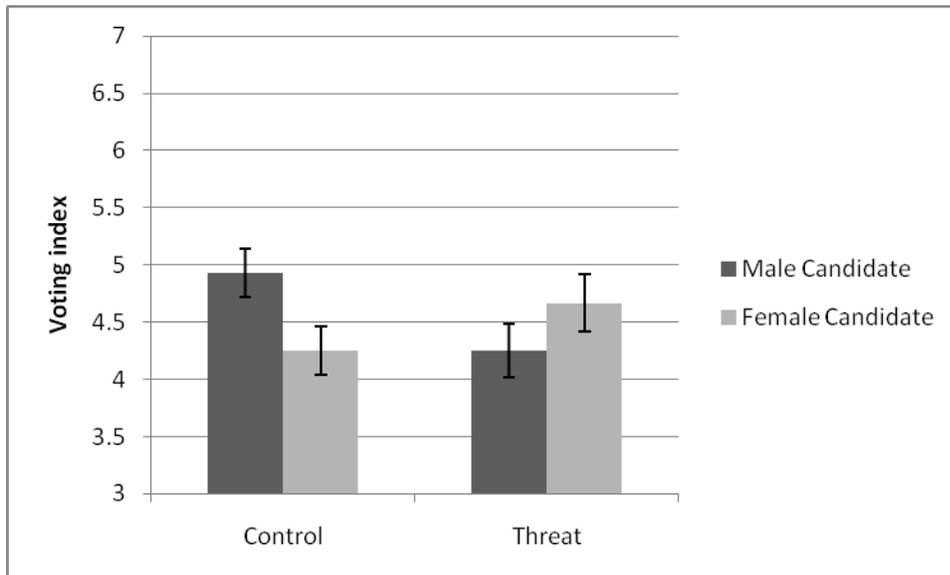
Figure 1. Effects of leader sex on beliefs about change- and stability-orientation in leadership:

Experiment 2a.



Note. Ratings for change and stability items were made on scales ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). The error bars in the graph represent standard errors.

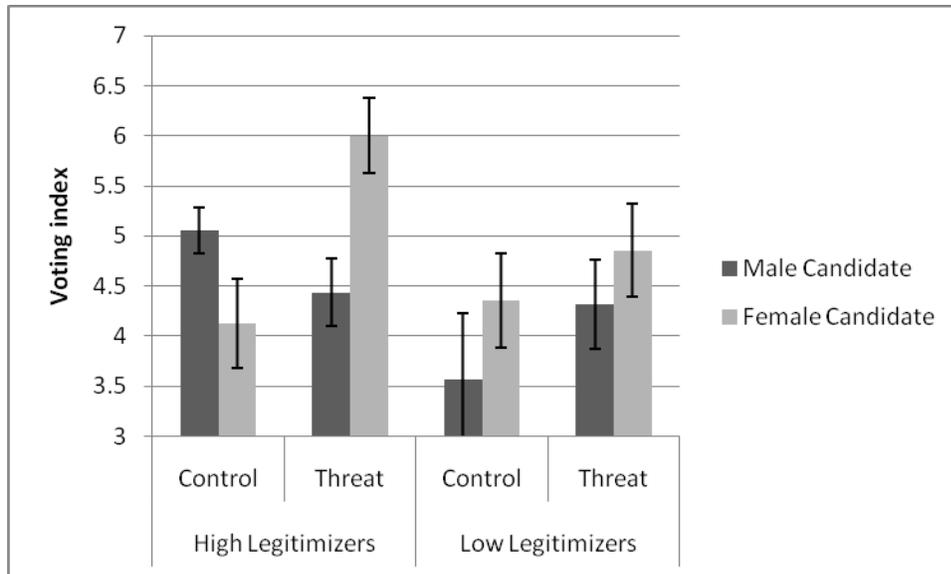
Figure 2. The effects of threat and candidate sex on evaluation: Experiment 3



Note. Candidate support ratings were made on scales ranging from 1 (*not at all*) to 7 (*extremely*). The error bars in the graph represent standard errors.

Figure 3. Moderation of gender-based leadership preferences under threat by legitimizing ideologies:

Experiment 4



Note. Individuals above the median on both SDO and SJ were classified as “high legitimizers,” and those who were below the median in both SDO and SJ were classified as “low legitimizers.” Candidate support ratings were made on scales ranging from 1 (*not at all*) to 7 (*extremely*). The error bars in the graph represent standard errors.

Footnotes

¹ Faculdade de Engenharia Industrial translates into English as the Industrial Engineering College.

This data base is maintained by the Centro Universitario da FEI, São Benardo do Campo.

² These names were selected to be equivalent in competence and attractiveness (Kasof, 1993).

³ Female participants ($M = 4.94, SD = 1.18$) supported candidates more than male participants did ($M = 4.40, SD = 1.36$), $F(1, 112) = 6.97, p = .01$.

⁴ Three marginal effects appeared. Those high in legitimizing ideologies ($M = 4.88, SD = 1.16$) were marginally more likely to support the candidate than those low in legitimizing ideologies ($M = 4.29, SD = 1.58$), $F(1, 63) = 3.63, p = .06$. Participants were also marginally more likely to support the candidate in the threat ($M = 4.82, SD = 1.33$) as opposed to the control condition ($M = 4.33, SD = 1.49$), $F(1, 63) = 3.60, p = .06$. Additionally, a marginal Threat \times Leader Sex interaction emerged, $F(1, 63) = 2.90, p = .09$, replicating the pattern of the Threat \times Leader Sex interaction for the full sample.

⁵ One anomalous aspect of the Experiment 4 findings is that in the full sample, the baseline preference for male over female candidates does not appear. However, this preference does appear marginally in the subsample of high and low legitimizers, and previous research has broadly replicated the baseline preference for male over female leaders (e.g., Dolan, 2010). Moreover, what is critical for our role congruity argument is that threat moderates leadership preferences, which holds true in this case: Even though preferences are statistically equivalent at baseline, preferences under threat shift to significantly greater favorability toward female than male leaders.