

The strong, sensitive type: Effects of gender stereotypes and leadership prototypes on the evaluation of male and female leaders [☆]

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Abstract

The disparity between the success of male and female leaders may result from the incongruity between the female sex role and the leadership role. We provide an in-depth test of role congruity theory [Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109, 573–598] through a mix of qualitative, experimental, and survey methodologies. Our studies identify current male and female leader prototypes and show evidence of both descriptive and prescriptive biases associated with gender in evaluating leaders. In addition, we examined participant sex-type finding that feminine individuals expect that leaders are more sensitive than masculine individuals, who expect that leaders are more masculine, strong, and tyrannical than feminine individuals. Similarly, sensitivity was more strongly associated with female leadership, whereas masculinity, strength, and tyranny were more strongly associated with male leadership. However, for female leaders to be perceived as effective they needed to demonstrate both sensitivity and strength, although male leaders only needed to demonstrate strength.

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Despite the advancement of women in the workplace, female leaders comprise 28.3% of CEOs of all organizations (Bureau of Labor Statistics, 2006), but only 6.7% of the highest earning offices within Fortune 500 companies (as of 2006) and 1.6% of the CEOs (Catalyst, 2007). Even when women do occupy managerial positions, there is evidence that they have the title of manager without the same responsibilities as their male counterparts (Reskin & Ross, 1992). Yet, that there are few dif-

ferences between the behaviors of male and female managers (Morrison, White, & Van Velsor, 1987) and even when accounting for the small differences that do exist (e.g., in education level), there is still an unexplained disparity in work outcomes among male and female managers (Cohn, 2000).

One explanation for the disparity in outcomes, despite the similarity in behavior, is that the same behaviors exhibited by men and women are perceived differently because of sex roles (Eagly, 1987; Eagly & Karau, 2002). Sex roles refer to socially shared expectations about how men and women should behave and are often examined in terms of agency and communion. Bakan (1966) described agency and communion as fundamental drivers of human existence. Specifically, communion relates to the motive to form social relationships

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and get along with others, emphasizing harmony and affiliation (Bakan, 1966). Agency relates to the motivation toward striving for power and control over others, emphasizing assertiveness, efficacy, and mastery (Bakan, 1966). Social role theory (Eagly, 1987) suggests that women are expected to be communal (e.g., helpful, nurturing, gentle) while men are expected to be agentic (e.g., assertive, controlling, confident) and when one behaves inconsistently with his or her sex role, he or she is evaluated negatively (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Eagly, 1987; Eagly, Wood, & Diekmann, 2000; Heilman, 2001). Therefore, agentic behavior exhibited by men should result in positive evaluations while that same behavior exhibited by women may result in negative evaluations.

Just as individuals have expectations for how men and women should behave, they have expectations for how leaders should behave—or leadership prototypes. When a leader behaves consistently with an observer's leadership prototype, he or she is seen as an effective leader by that individual (Lord & Maher, 1993). Problems arise for female leaders in that the expectations for how women should behave are in contrast to the expectations for how leaders should behave (Eagly & Karau, 2002). The apparent conflict between the female sex role and the leadership role is outlined in role congruity theory (Eagly & Karau, 2002). The current research offers a direct test of this paradox through four studies examining the extent to which sex role expectations result in different prototypes for male and female leaders and how violations of sex roles and leadership prototypes impact the evaluation of male and female leaders.

Leadership prototypes. Lord and Maher's (1993) Leadership Categorization Theory suggests that individuals hold mental representations, or prototypes, for how leaders should behave. One's prototypes affect his or her attention, encoding, and retrieval of schema-consistent information (Phillips & Lord, 1982). Lord and Emrich (2001) suggest that even physical features associated with race, sex, or ethnicity, may activate prototypes that impact perceivers' expectations for male and female leaders. An individual's experiences and his or her social identity shape the expectations that he or she has for how a leader should behave (Hogg, 2001). Social identity theory states that individuals adopt an identity within a group that dictates how they perceive themselves with respect to the group and to members of outgroups (Tajfel & Turner, 1986). Further, these expectations impact the extent to which one is perceived as an effective leader (Hogg et al., 2006).

Specifically, leaders whose behavior and attitudes match leadership prototypes are perceived more positively than leaders whose behavior and attitudes do not (Lord, Foti, & De Vader, 1984; Lord & Maher, 1993; Smith & Foti, 1998). Although leadership prototypes vary among individuals (Lord, Brown, Harvey,

& Hall, 2001) and may be impacted by one's organizational and group membership (e.g., Hogg et al., 2006), there are leadership prototype dimensions that are held consistently across most individuals (Epitropaki & Martin, 2004). Offermann, Kennedy, and Wirtz (1994) found that there are eight commonly held leader prototype dimensions: sensitivity, dedication, tyranny, charisma, attractiveness, intelligence, strength, and masculinity. These eight dimensions represent the most comprehensive examination of the leadership prototype, to date, and have been generally supported by subsequent research (Epitropaki & Martin, 2004). Therefore, in the current study, we focus on these eight leadership prototype dimensions.

Gender expectations. Little research has examined whether prototype expectations differ for male and female leaders, although related research has examined differing expectations across sexes. In her seminal work, Schein (1973, 1975) asked male and female managers to rate whether a list of characteristics was most similar to "men in general," "women in general," or "middle managers." The characteristics endorsed for "middle managers" were much more similar to "men in general" than to "women in general," suggesting that our expectations for men are more similar to our expectations for leaders than are our expectations for women. These findings were replicated more than 15 years later (Brenner, Tomkiewicz, & Schein, 1989; Heilman, Block, Martell, & Simon, 1989).

The incompatibility between the female sex role and the leadership role is described in role congruity theory (Eagly & Karau, 2002). The agentic qualities expected for men more closely mirror our expectations for leaders than do the communal qualities expected for women. According to role congruity theory, the inconsistency between the female sex role and the leadership role can result in two types of biases: descriptive and prescriptive (Burgess & Borgida, 1999; Eagly & Karau, 2002; Heilman, 2001). Descriptive bias results from the lack of fit between the feminine role and the leader role, leading to the conclusion that a woman does not possess the necessary characteristics to fill the leader role. Prescriptive bias occurs when a woman adopts a more masculine leadership style, violating her sex role expectations. In both cases, the female leader is evaluated negatively.

A small body of research has examined the interaction between sex and leadership behaviors. Forsyth, Heiney, and Wright (1997) found that female leaders who exhibited a "task-oriented" style were perceived as more effective than those who exhibited a "relationship-oriented" style, but they were also liked less by subordinates. Similarly, in a meta-analysis, Eagly, Makhijani, and Klonsky (1992) found that male leaders were evaluated somewhat more favorably than female leaders, but that this was particularly true when female

leaders were described as using a masculine leadership style. Moreover, dominant women and women who use more assertive speech (Carli, 1990; Wiley & Eskilson, 1985) are less influential to men than less dominant and assertive women. Similarly, research demonstrates that women are evaluated more negatively than men when they express anger (Glomb & Hulin, 1997; Lewis, 2000).

The current research. The current research seeks to integrate the work on leadership prototypes with that of gender stereotypes of female leaders. While researchers have demonstrated the effects of leader prototypicality on perceptions of leader effectiveness, it has not examined the role of leader sex as a type of leadership cue, with two exceptions (Anderson, Lievens, van Dam, & Born, 2006; Scott & Brown, 2006). Scott and Brown (2006) found that participants had longer reaction times when agentic prototype dimensions were paired with female leaders and when communal prototype dimensions were paired with male leaders, than when the pairing was gender consistent. The longer reaction times suggest that participants do not expect female leaders to be agentic or male leaders to be communal. We build from their study by examining each leadership prototype dimension individually and examining the effects of differing expectations on evaluations of male and female leaders.

Relying upon the eight leadership prototype dimensions found in the literature: sensitivity, dedication, tyranny, charisma, attractiveness, intelligence, strength, and masculinity, we test the extent to which individuals hold differing expectations for male and female leaders, and the effects of those expectations on the evaluation of male and female leaders. We expect that the agentic prototype dimensions should be more strongly endorsed for male leaders than female leaders, the communal prototype dimensions should be more strongly endorsed for female leaders than male leaders, and there should be no differences on the non-gendered prototype dimensions. Moreover, when leaders behave in a manner inconsistent with their sex role endorsed prototype dimensions, they should be evaluated negatively.

We test these expectations in the four studies that follow. In the first study, we test whether agentic prototype dimensions are more strongly endorsed for male leaders and communal prototype dimensions are more strongly endorsed for female leaders. In the second study, we test the effects of behaving consistently with agentic and communal prototype dimensions on the evaluation of male and female leaders in terms of likeability and effectiveness using vignettes. In the third study, we examine those effects on employees' perceptions of their own leaders to test the generalizability of the findings, while examining the potential effects of follower sex-type. Finally, in the fourth study, we further examine the effects of sex-type on individuals'

ratings of the prototypicality of all eight of the leader prototypes for male and female leaders and effective leaders.

Study 1: Prototype generation

The first study addresses the question of whether agentic and communal leadership prototype dimensions are endorsed differentially for male and female leaders. While previous research has generated a comprehensive list of leadership prototype dimensions (Offermann et al., 1994), the work did not address whether participants were thinking of male leaders, female leaders, or both when they generated characteristics of leaders. In the current study, we asked participants to generate characteristics of male leaders or female leaders, rather than simply 'leaders' in order to assess whether agentic prototype dimensions would be more strongly endorsed for male leaders and communal prototype dimensions would be more strongly endorsed for female leaders. Using Bakan's (1966) description of agency and communion, we expect that agentic behaviors are those that relate to striving for power and control over others, emphasizing assertiveness, efficacy, and mastery, whereas communal traits relate to forming social relationships, emphasizing harmony and affiliation.

Based on these definitions, and work on social role theory (Eagly, 1987), we assert that *strength, masculinity,* and *tyranny* represent agentic characteristics, whereas *sensitivity* is a communal prototype dimension. Drawing from Offermann et al.'s (1994) work, strength includes characteristics such as being strong and bold. Tyranny includes being loud, conceited, dominant, domineering, pushy, power-hungry, demanding, obnoxious, manipulative, conceited, and selfish. Masculine includes ideas about leaders being male and masculine. Sensitivity includes being sympathetic, sensitive, compassionate, understanding, sincere, warm, forgiving, and helpful. We argue that the remaining prototype dimensions are gender neutral. Attractiveness, which includes being well-groomed, well-dressed, and classy, should not differ between male and female leaders because it is neither communal nor agentic. The other prototype dimensions, dedication, charisma, and intelligence have been described as agentic because they relate to a task focused orientation (Scott & Brown, 2006).

However, charisma, which includes being energetic, inspiring, enthusiastic, and dynamic relates as strongly to an interpersonal orientation as it does to a task-orientation (Bass, 1990). Further, research suggests that there are no differences in intelligence between men and women (Halpern & LaMay, 2000). In a recent study on informal leadership, Neubert and Taggar (2004) found that general mental ability more strongly predicted informal leadership for women than for men. Dedication, which includes being hard working, moti-

vated, and goal oriented, is the trait that is most closely aligned to agentic behavior. However, a recent assessment center study on military officer candidates found that female leaders are perceived as more dedicated than male leaders (Anderson et al., 2006). We expect that these prototype dimensions (dedication, intelligence, and charisma) are so central to the leader role that they are powerful enough to overwhelm the influence of gender roles (Kanter, 1977).

Hypothesis 1: Agentic leadership prototype dimensions (strength, masculinity, tyranny) will be more strongly associated with male leaders than female leaders.

Hypothesis 2: Communal leadership prototype dimensions (sensitivity) will be more strongly associated with female leaders than male leaders.

Hypothesis 3: Non-gendered leadership prototype dimensions (dedication, charisma, attractiveness, intelligence) will be associated equally with male and female leaders.

Method

Participants consisted of 131 undergraduate business students (48 males) who participated in this study for course credit. A questionnaire was distributed that asked the participants to either list characteristics of a male leader or list characteristics of a female leader. Participants were randomly assigned to one of these two conditions. We followed the procedures outlined by Offermann et al. (1994) in terms of prototype generation. The generated characteristics were then categorized into the eight leadership prototype dimensions. All of the characteristics were typed into a data base and a total list of 1114 words was generated. The average number of words per person was 8.50 ($SD = 4.57$) and it ranged from one word to 30 words.

Coding

In order to test whether certain prototype dimensions were generated more frequently for male or female leaders, a coding process was conducted to categorize the generated words into Offermann et al.'s (1994) eight leadership prototype dimensions: sensitivity, dedication, tyranny, charisma, attractiveness, intelligence, strength, and masculinity. Two coders examined the original words comprising Offermann et al.'s (1994) prototype dimensions to use as a guideline for the coding procedure. For example, sample items for the factor of sensitivity include sympathetic, sensitive, compassionate, and understanding. The coders' original level of agreement was a Cohen's Kappa of .65. After the initial coding process the two coders discussed the rating categories

and made changes resulting in a Cohen's Kappa of .87. Based on these ratings 635 of the 1114 words were reliably coded into the eight leadership prototype dimensions. This is similar to the original study by Offermann et al. (1994) in which only 57 of the original 160 words were coded into the eight factors.

Examining the words that were not coded into the eight prototype dimensions, the most consistently generated non-prototype words related to communication ability and integrity. Of the other words that were generated frequently, it appears that more were agentic (assertive, brave, confident, decisive, direct, eager, independent, rational, risk taker, serious, stern, strict, strong willed, unemotional) than communal (attentive, emotional, empowering, creative, encouraging, listener, likeable, open).

Results and discussion

Data from the coding procedure were entered into the original file so that each word was assigned a number 1–8 to indicate the prototype dimension that it matched or 00 for a non-prototype word. The number of times each prototype dimension was generated by each participant was calculated and the data were transposed so that each row of data represented a participant and the columns represented each of the eight prototype dimensions (along with a column representing condition—male or female leader). In order to analyze the data, the number of times that each prototype dimension was generated, which ranged from 0 to 8, was recoded into two categories representing whether the prototype dimension was generated infrequently (0 or once) or frequently (twice or more) by each participant. Table 1 contains the means, standard deviations, and correlations among the prototype dimensions.

The data were analyzed using logistic regression with the number of times each prototype dimension was generated (never/once, two/more) as the dependent variable and leader sex as the independent variables. Participant sex was included as a covariate to examine whether differences existed between men and women in their leadership prototypes.¹ Hypothesis 1, that agentic leadership prototype dimensions (strength, masculinity, tyranny) would be more strongly associated with male leaders than female leaders was supported by significant effect of leader sex on the generation of each of these prototype dimensions, in the expected direction (Table 2). For example, for male leader, strength was generated once or less by 54 participants but twice or more by 12 participants. For female leader tyranny was gener-

¹ A series of logistic regressions were also conducted to ensure that participant sex and leader sex did not interact for any of the prototype DVs. There were no interactions between leader sex and participant sex.

Table 1
Zero-order correlations among generated prototype dimensions from Study 1

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Leader sex	0.11	0.42	—									
2. Participant sex	0.78	1.17	.06	—								
3. Masculinity	1.02	0.15	-.15	-.10	—							
4. Tyranny	1.21	0.41	-.43***	.07	-.08	—						
5. Sensitivity	1.35	0.48	.53***	-.07	-.11	-.34***	—					
6. Charisma	1.11	0.32	.03	-.08	-.06	-.12	.29***	—				
7. Attractiveness	1.06	0.24	-.13	-.14	.17*	.11	-.05	.01	—			
8. Dedication	1.26	0.44	-.03	-.06	.14	-.04	.04	-.05	-.08	—		
9. Intelligence	1.14	0.35	-.04	-.25**	.09	-.04	-.11	-.07	.18*	.17	—	
10. Strength	1.11	0.31	-.24**	-.05	-.05	.13	-.10	.03	.02	-.04	.15	—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 131$. Leader is coded as 0, male leader; 1, female leader.

ated once or less by 63 participants but was only generated twice or more by two participants.

In support of Hypothesis 2, that the communal prototype dimension of sensitivity would be more strongly associated with female leaders than male leaders, the logistic regression also revealed a main effect of leader sex on sensitivity in the expected direction. For male leader, 59 participants generated sensitivity once or less while only 7 generated it twice or more. For female leader, 26 participants generated sensitivity once or less while 39 generated sensitivity twice or more. Finally, in support of Hypothesis 3, that the *non*-gendered leadership prototype dimensions (dedication, charisma, attractiveness, intelligence) would be associated equally with male and female leaders, there were no significant effects of leader sex on any of these prototype dimensions.² Participant sex only predicted the number of times intelligence was generated with male participants generating the dimension of intelligence more frequently than female participants (Table 2).

Study 2: Effects of strength and sensitivity

The goal of the first study was to examine the extent to which individuals hold different prototypes for male and female leaders. Although the first study demonstrated differences in the leadership prototype dimensions generated for male and female leaders, it offers no insights as to the potential effects of those differences. The second study was designed to test the impact of violations and confirmations of the leadership prototype dimensions, *strength* and *sensitivity*, on the evaluation of male and female leaders. We chose to focus on these two dimensions because they represent two positive aspects of leadership on which we found significant gender differences. A recent factor analysis of the leadership

prototype dimensions suggests that the other two prototype dimensions for which we found differences, masculinity and tyranny, load on a separate higher order factor representing an anti-leadership prototype (Epitropaki & Martin, 2004) so they were excluded from Study 2. In other words, because they are not associated with effective leadership, including these prototype dimensions would lead to the opposite of what we would expect for the other leadership prototype dimensions.

Role congruity theory would suggest that strong male leaders (who are insensitive) would be perceived more positively than sensitive male leaders (who are weak) because the sensitive male leaders are in violation of their agentic male role (Eagly & Karau, 2002). Similarly, sensitive female leaders (who are weak) should be perceived more positively than strong female leaders (who are insensitive) because the strong female leader is in violation of her communal female role. In addition, we expect that a strong male leader would be perceived more positively than a strong female leader, because she is in violation of her sex role while he is not in violation of his sex role. A sensitive female leader would be perceived more positively than a sensitive male leader, because he is in violation of his sex role while she is not. Finally, role congruity theory would suggest that a strong male leader would be perceived more positively than a sensitive female leader because, even though neither is in violation of their sex role, the female leader is more dissimilar to the leadership prototype because she is not masculine and is failing to exhibit strength (two prototype dimensions), while the male leader is only failing to exhibit sensitivity (one prototype dimension).

Because previous studies on sex differences and leadership have focused on two main outcomes: effectiveness (Forsyth et al., 1997; Lewis, 2000) and likeability (Forsyth et al., 1997; Wiley & Eskilson, 1985), we will focus on these two variables. Role congruity theory also discusses the effects of agentic and communal behavior on likeability and effectiveness (Eagly & Karau, 2002). Specifically, the theory suggests that women who adopt agentic behavior are liked less and, therefore, may not gain access to the leader role. Effectiveness is implicated

² The count data were also analyzed breaking prototype generation into three categories to represent whether the prototype was generated never, once, or twice/more and with correlations. The results were the same for all prototypes.

Table 2
Logistic regressions of participant sex on leader sex on each leadership prototype

	0–1		2–8		β	
	Male	Female	Male	Female	Participant sex	Leader sex
Masculinity	63	65	3	0	-1.18	-18.07***
Tyranny	41	63	25	2	0.63	-3.02***
Sensitivity	59	26	7	39	-0.62	2.62***
Charisma	59	57	7	8	-0.48	0.20
Attractiveness	60	63	6	2	-1.09	-1.10
Dedication	48	49	18	16	-0.25	-0.13
Intelligence	56	57	10	8	-1.45**	-0.17
Strength	54	63	12	2	-0.21	-1.94*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 131$. 0–1 indicates the number of participants who did not mention the prototype dimension at all or mentioned it once. 2–8 indicates the number of participants who mentioned the prototype dimension between 2 and 8 times.

when women do gain access to a leadership role, but cannot fulfill the demands of the female gender role and the leader role. Although role congruity theory focuses on liking and effectiveness at two different stages in leadership (before and after one becomes a leader, respectively), we expect that the effects for liking will extend to evaluations of leaders in the same way that it does in the evaluation of individuals before they become leaders.

Hypothesis 1a: Female leaders who are high on sensitivity (low on strength) will be perceived more positively than female leaders who are low in sensitivity (high on strength) in terms of likeability and effectiveness.

Hypothesis 1b: Female leaders who are high on sensitivity (low on strength) will be perceived more positively than male leaders who are high on sensitivity (low on strength) in terms of likeability and effectiveness.

Hypothesis 2a: Male leaders who are high on strength (low on sensitivity) will be perceived more positively than male leaders who are low in strength (high on sensitivity) in terms of likeability and effectiveness.

Hypothesis 2b: Male leaders who are high on strength (low on sensitivity) will be perceived more positively than female leaders who are high on strength (low on sensitivity) in terms of likeability and effectiveness.

Hypothesis 3: Male leaders high on strength (low on sensitivity) will be perceived more positively than female leaders who are high on sensitivity (low on strength) in terms of likeability and effectiveness.

Method

Participants were 101 members of the community who were recruited from public places, such as the mall food court and bookstores, and asked to participate in this study. The response rate was approximately 85%. Among the participants, there were 41 men and 70 women and the mean age of the sample was 24.58

($SD = 10.79$). Most of the participants had previous work experience with the average number of years being 6.67 ($SD = 7.62$). The majority were White ($n = 61$), but there were also 8 Asian, 16 Black, 9 Hispanic, and 6 participants who indicated “other” as their race.

Participants were asked to read a short vignette about a leader and then rate that leader on likeability and effectiveness. The vignette was designed to look like a newspaper article in which a new CEO for a fictitious company was interviewed. The participants were randomly assigned to receive a vignette describing the leader, John or Joan Davenport, as being strong (and low in sensitivity) or sensitive (and low in strength) resulting in a 2 (sex of leader) \times 2 (leader style – strong or sensitive) experimental design. The leader was described as having a great deal of experience, although there is some doubt that he or she will be successful at this company. Pilot testing indicated that if the leaders were described as too successful, there were no differences in how they were perceived by participants regardless of leader sex or condition. The vignette is included in [Appendix A](#).

After reading the vignette, participants rated the leader on likeability and effectiveness, using scales created for this study. The likeability scale included three items: “Davenport will be liked by his (or her) employees”; “Davenport is likable”; “Davenport’s employees will like working for him (or her)”. The effectiveness scale also included three items: “Davenport will be effective”; “Davenport will succeed at Lanitol”; “Davenport will improve performance at Lanitol”. Both scales had high internal consistency ($\alpha = .79$ and $\alpha = .87$, respectively). For both scales, participants were asked to indicate their responses on a scale of 1–7, ranging from “strongly disagree” to “strongly agree”.

Results

Means, standard deviations, and intercorrelations among study variables are presented in [Table 3](#). The likeability and effectiveness scales conformed to the normal distribution.

Table 3
Zero-order correlations among study variables from Study 2

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Participant sex	0.60	0.59	—				
2. Leader sex	0.40	0.49	.01	—			
3. Leadership style	0.52	0.50	.16	.00	—		
4. Liking	4.10	0.87	.11	-.10	.48***	—	
5. Effectiveness	4.58	0.92	.02	-.21*	-.13	-.14	—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 101$. Leader is coded as 0, male leader; 1, female leader. Leadership style is coded as 0, sensitive; 1, strong.

Manipulation check

Participants also completed two manipulation checks for leadership style and leader sex. The manipulation check for style included three items: “Davenport believes that leaders should be strong”; “Davenport believes that leaders should be sensitive” (reverse coded); “Davenport is known for being strong” and had a high level of internal consistency ($\alpha = .85$). The manipulation check for sex consisted of a single item “Davenport is a man.” For both scales, participants were asked to indicate their responses on a scale of 1–7, ranging from strongly disagree to strongly agree. Two t -tests were conducted to test the efficacy of the manipulations. The manipulation check for leadership style revealed a statistically significant difference between condition $t(99) = 16.39$, $p < .001$ such that participants in the strong condition ($M = 5.47$, $SD = 1.34$) thought that the leader was stronger than those in the sensitive condition ($M = 1.83$, $SD = 0.68$). The sex manipulation check was also significant $t(99) = 16.87$, $p < .001$ such that when participants read the John vignette they indicated that their leader was male ($M = 6.21$, $SD = 1.42$) and when they read the Joan vignette they did not ($M = 1.65$, $SD = 1.29$).

Test of hypotheses: Likeability

To test both hypotheses, two ANOVAs were conducted with leader sex and leadership style (strong, sensitive) as the independent variables and either likeability or effectiveness as the dependent variable. Participant sex was included as a covariate, and it did not interact with either of the IVs. The ANOVA for likeability revealed no effect for participant sex ($F(1, 96) = 0.34$, $p > .05$, $\eta^2 = .00$) or leader sex ($F(1, 96) = 0.00$, $p > .05$, $\eta^2 = .00$). Participants liked the male leader ($M = 4.11$, $SD = .91$) equally well as the female leader ($M = 4.09$, $SD = .81$). But, there was a statistically significant effect for style ($F(1, 96) = 23.08$, $p < .001$, $\eta^2 = .19$). Participants liked the strong leader ($M = 4.50$, $SD = 0.78$) better than the sensitive leader ($M = 3.67$, $SD = 0.75$). There was also a sex by style interaction ($F(1, 96) = 9.97$, $p < .01$, $\eta^2 = .09$).

To explain the interaction a series of follow up t -tests were run using Fisher’s Least Significant Difference (LSD) tests. In this procedure, follow up tests are only

performed for the individual ANOVA tests that reached statistical significance. Fisher’s LSD is a powerful post hoc test that avoids the inflation of the familywise error rate (Howell, 1997). Hypotheses 1a and 1b suggested that female leaders who are high on sensitivity will be perceived more positively than female leaders who are high in strength and male leaders who are high in sensitivity, respectively. Hypothesis 1a was not supported such that there was no difference between the strong female ($M = 4.21$, $SD = .84$) and sensitive female leader in terms of likeability ($M = 3.96$, $SD = .78$, $t(58) = -0.94$, $p > .05$). However, Hypothesis 1b was supported such that the sensitive female leader was liked more than the sensitive male leader ($M = 3.47$, $SD = .68$, $t(46) = -2.32$, $p < .05$, Fig. 1).

Hypotheses 2a, 2b, and 2c suggested that male leaders who are high on strength will be perceived more positively than male leaders who are high in sensitivity, female leaders who are high on strength, and female leaders who are high on sensitivity, respectively. All three hypotheses were supported with the follow up t -tests. The mean for the strong male leader ($M = 4.69$, $SD = .69$) was significantly greater than the mean for the sensitive male leader ($M = 3.47$, $SD = .68$, $t(59) = -6.93$, $p < .001$), the strong female leader ($M = 4.21$, $SD = .84$, $t(51) = 2.27$, $p < .05$), and the sensitive female leader ($M = 3.96$, $SD = .78$, $t(49) = 3.43$, $p < .001$). In sum, the strong male leader was liked the most, followed by both female leaders, followed by the sensitive male leader.

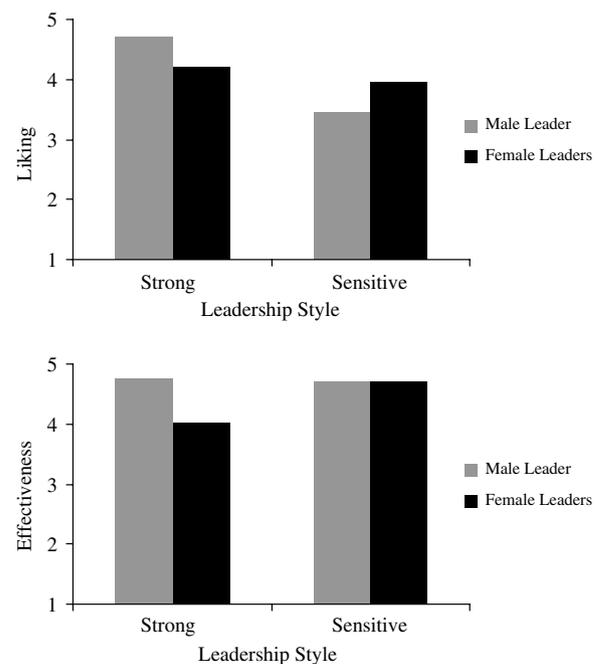


Fig. 1. Effects of leader strength and sensitivity and sex on likeability and effectiveness.

Test of hypotheses: Effectiveness

The ANOVA for effectiveness revealed no significant effect for participant sex ($F(1,96) = 0.02, p > .05, \eta^2 = .00$) or leadership style ($F(1,96) = 2.99, p > .05, \eta^2 = .03$). But, there was a statistically significant effect for leader sex ($F(1,96) = 4.21, p < .05, \eta^2 = .04$). Participants thought that the male leader ($M = 4.73, SD = 1.00$) would be more effective than the female leader ($M = 4.34, SD = .71$) but reported no differences in the effectiveness of strong ($M = 4.47, SD = .87$) or sensitive ($M = 4.70, SD = .69$) styles. There was also a leader sex by style interaction ($F(1,96) = 4.19, p < .05, \eta^2 = .04$, Fig. 1). To explain the interaction a series of follow up *t*-tests were run.

In support of Hypothesis 1a, the sensitive female leader ($M = 4.70, SD = .65$) was seen as more effective than the strong female leader ($M = 4.01, SD = .62, t(38) = 3.43, p < .001$). However, contrary to Hypothesis 1b, the sensitive female leader was not seen as more effective than the sensitive male leader ($M = 4.70, SD = 1.13, t(46) = -.01, p > .05$). Contrary to Hypotheses 2a and 3, the strong male leader ($M = 4.76, SD = .89$) was not seen as more effective than the sensitive male leader ($M = 4.70, SD = 1.13, t(46) = -.24, p > .05$) or sensitive female leader ($M = 4.70, SD = .65, t(49) = .25, p > .05$). However, in support of Hypothesis 2b, the strong male leader was seen as more effective than the strong female leader ($M = 4.01, SD = .62, t(51) = 3.34, p < .01$). Therefore, both male leaders and the sensitive female leader were seen as equally effective, but more effective than the strong female leader.

In sum, Hypothesis 2b, that the strong male leader would be perceived more positively than the strong female leader was supported for both likeability and effectiveness. Hypotheses 2a and 3, that the strong male leader would be perceived more positively than the sensitive male and sensitive female leaders, were only supported for likeability. Hypothesis 1a that the sensitive female leader would be perceived more positively than the strong female leader was only supported for effectiveness and Hypothesis 2a that the sensitive female leader would be perceived more positively than the sensitive male leader was only supported for likeability but not effectiveness.

Discussion

The second study examined follower perceptions of likeability and effectiveness of male and female leaders described as strong and insensitive or weak and sensitive. Leaders described as strong were liked more than those described as sensitive. More importantly, interactions emerged between leader sex and leadership style. In terms of liking, strong male leaders were liked the best, and sensitive male leaders were liked the least.

The strong female leader and sensitive female leaders were liked equally well, but less than the strong male leader and more than the sensitive male leader. The findings from this study provide support for role congruity theory. The strong male leader has violated one leadership prototype dimension (sensitivity). But this prototype dimension is not central to his sex role and he was liked the most. The sensitive male leader has violated both a leadership prototype dimension (strength) and his sex role and he was liked the least. One explanation for the findings is that the leadership prototype dimension of strength is more important than that of sensitivity. When a male leader violates that prototype dimension it has more serious consequences than female leaders' violation of the sensitivity prototype. This explanation is supported by the main effect for strength on likeability.

An alternative explanation for why the sensitive female leader was liked less than the strong male leader is that, by being a woman, the female leader has already violated one leadership prototype, because she is presumably low in masculinity. So, regardless of her behavior she is already at a disadvantage compared to her male counterpart. Both explanations would also fit with the findings related to effectiveness. For effectiveness, we found that all leaders were seen as equally effective, except the strong female leader who was the least effective. Although role congruity theory would predict that sensitive male leaders would be perceived as ineffective, they may have demonstrated their prototypicality by simply being male. Further, participants may believe that he is still strong enough to be a leader, just because he is a man. For female leaders, sensitivity was required to be perceived as effective.

Study 3: Sex-type, strength, and sensitivity

There are at least three concerns with Study 2. First, because strength and sensitivity were manipulated together (strong, insensitive leader or weak, sensitive leader) it is unclear whether the findings are driven by the leader's possession of one prototype dimension (being high in strength), or violation of the other prototype dimension (being low in sensitivity). Second, the unrealistic nature of the study raises concern over the generalizability of the findings. Followers' perceptions of their actual leaders would be influenced by more information than whether the leader was described a strong or sensitive and studies have shown differential effects of stereotype processing in information rich as opposed to information poor settings (Lord & Alliger, 1985). In line with role congruity theory, we expect that agentic behavior (strength) demonstrated by male leaders will lead to positive reactions, but agentic behavior exhibited by female leaders will lead to negative reactions because the behavior is in contrast to their gender

role. We expect the opposite for male leaders and sensitivity.

Hypothesis 1: Leader strength will be more positively related to the likeability and effectiveness of male leaders, but negatively for female leaders.

Hypothesis 2: Leader sensitivity will be positively related to the likeability and effectiveness of female leaders, but negatively for male leaders.

Third, as this research focuses on sex-type stereotypes, it is important to examine the effects of individuals' sex-type on their perceptions. In the previous two studies, we found little evidence of any effect for participants' sex on their prototypes of male and female leaders, which is consistent with other studies on female gender violations (e.g., Heilman & Chen, 2005; Heilman, Wallen, Fuchs, & Tamkins, 2004) but inconsistent with other research (e.g., Carli, LaFleur, & Loeber, 1995; Rudman, 1998). The exception is that in Study 1 we found that male participants endorsed intelligence as a leadership prototype dimension to a greater extent than female participants. Study 2 demonstrated no main effects or interactions between participant sex and leadership prototype dimensions on perceptions of male and female leaders. However, much research examining individual differences on evaluations of women as job candidates, employees, and managers has taken into account not just people's sex, but their beliefs regarding men and women in society (Bauer & Baltes, 2002; Davison & Burke, 2000). The idea is that these belief systems more accurately assess one's gender schema than does reported sex. Gender schema theory (Bem, 1981) explains how people develop sex roles and describes the potential impact of sex roles on how people perceive themselves and others.

Specifically, sex typing begins when children observe how adults treat boys and girls. As Bem (1981) said, "Adults in the child's world rarely notice or remark upon how strong a little girl is becoming or how nurturant a little boy is becoming, despite their readiness to note precisely these attributes in the 'appropriate' sex." (p. 355). Once one has a well-developed gender schema, that schema becomes a descriptive and prescriptive guide for judging the self and others. In terms of the descriptive side, one's self-schema is likely to impact the extent to which he or she perceives others to be similar to him or herself because of the cognitive availability (Tversky & Kahneman, 1973, 1974) of that schema. That is, if one is a masculine individual he or she is likely to perceive others in a schema-consistent way. In terms of the prescriptive side, the schema also impacts one's judgments about how others *should* behave (Kohlberg, 1966). If one is masculine, then he or she should believe that others should be masculine as well. Just as Phillips and Lord (1982) suggest that one's leadership proto-

types affect his or her attention, encoding, and retrieval of schema-consistent information, gender schema theory suggests that individuals' sex-type affects how they perceive others' sex roles.

Previous studies have assessed these beliefs using constructs such as attitudes toward women (Spence & Helmreich, 1978), interdependent/independent self construal (Guimond, Chatard, Martinot, Crisp, & Redersdorff, 2006), and ambivalent sexism (Glick & Fiske, 1996; Hogg et al., 2006). Within their social identity theory of leadership, Hogg et al. (2006) showed that ambivalent sexism affected the extent to which participants saw their male or female leaders as being prototypical for a gendered male versus gendered female task.³ The current study uses Bem's sex role inventory (Bem, 1974) to examine the effects of sex role, as a form of gender schema, on the endorsement of the eight leadership prototype dimensions we examined in Study 1. The Bem Sex Role Inventory has been used in numerous studies to assess the effects of gender schema on self and other perceptions, as well as behavior.

For example in the organizational literature, the Bem Sex Role Inventory predicts what type of women were more likely to experience sexual harassment (Berdahl, 2007), the type of career dimensions associated with career satisfaction (Eddleston, Veiga, & Powell, 2006), and predicted leader emergence better than sex alone (Kent & Moss, 1994). In a study of hypothetical male and female managers and CEOs, Dennis and Kunkel (2004) showed that sex-type affected ratings of male and female leaders such that individuals with more masculine sex-types viewed men as more effective leaders than those with a feminine sex-type. Their results were similar to those found by Powell, Butterfield, and Parent (2002). However, these studies only looked at general ratings of leader behavior, but did not look specifically at leadership prototype dimensions. Therefore, we propose the following hypotheses:

Hypothesis 3: Masculine sex-types will perceive strength to be more important to the effectiveness and likeability of male leaders.

Hypothesis 4: Feminine sex-types will perceive sensitivity to be more important to the effectiveness and likeability of female leaders.

Method

A pilot study was conducted using a small sample in which all of the variables were examined except for follower sex-type. The results indicated a need for addi-

³ However, another study on leader prototypes and gender, which used the ambivalent sexism scale showed no differential effects on information processing (Scott & Brown, 2006).

tional power, but the findings from the pilot study were consistent with the findings of the study reported here (although the data from the two studies were not combined). In order to estimate the number of participants needed to detect a three-way interaction (e.g., follower sex-type, boss sex, boss strength) using multiple regression a power analysis was conducted. To test a three-way interaction, power was estimated for seven variables in the regression (three independent variables, the 3 two-way interactions, and 1 three-way interaction). Using a medium effect size (Cohen, 1988), a power $\delta = .80$, and a $p < .05$, a total number of 103 participants are needed.

Therefore, data were collected from 110 participants to ensure an adequate sample size. The participants were business students from a large university in the rocky mountain region. There were 62 men and 48 women, most of whom were currently working. One participant only completed the first page of the survey and his data were not included in the analyses. Their average work experience was 7.15 years ($SD = 5.22$) and their mean age was 27.98 ($SD = 5.48$). They were asked to rate their current supervisor on likeability and effectiveness and then asked to rate him or her on strength and sensitivity. They were then asked to report on whether the supervisor was male ($n = 77$) or female ($n = 32$). Finally, they completed the BEM Sex Role Inventory (Bem, 1981).

The scales used for likeability ($\alpha = .93$) and effectiveness ($\alpha = .87$) were the same as the previous study. The scale for strength included three items: “Most employees think that my boss is strong in his/her leadership style”; “I think that my boss is a strong leader”; “I think that my boss could be stronger in his/her role as a leader” (R), and there was a high level of internal consistency ($\alpha = .81$). The scale for sensitivity included three items: “Most employees think that my boss is sensitive in his/her leadership style”; “I think that my boss is a sensitive leader”; “I think that my boss could be more sensitive in his/her role as a leader” (R), and also had a high level of internal consistency ($\alpha = .75$).

Participants also completed the Bem Sex Role Inventory (Bem, 1974) by choosing the extent to which each of 60 words described them on a 7-point scale with 1 indicated “Never or almost never true” and 7 indicating

“Always or almost always true.” The instrument is scored by summing responses on two 20-item subscales containing relatively masculine and feminine words. The remaining 20 items are filler and are not scored. The Cronbach’s alpha for the 20 items of the masculinity scale was ($\alpha = .87$) and for femininity was ($\alpha = .79$). Given the most recent factor-analytic results (Choi, Fuqua, & Newmann, 2007), we used a two-factor solution (masculinity or femininity) for the BEM results, rather than the four factor solution (Masculine, Feminine, Androgynous, and Undifferentiated). The difference score of one’s scores on the masculinity scale and femininity scale was taken and a median split conducted on that difference to determine if one is more masculine or feminine. The inventory has demonstrated consistent reliability and validity that have held over time (Holt & Ellis, 1998).

Results

Means, standard deviations, and intercorrelations among study variables are presented in Table 4. All variables conformed relatively well to the normal distribution. There were no outliers (variables more than three standard deviations from the mean). To test all hypotheses, we conducted two hierarchical regressions for each of the dependent variables. We entered the main effects of follower sex-type (masculine, feminine), leader sex, and leader strength (or sensitivity) in the first step of the regression equations with either effectiveness or likeability as the dependent variable. Then the two-way interactions between BEM and leader sex, BEM and leader strength (or sensitivity) and leader sex and leader strength (or sensitivity) were entered in the second step of the regression equation. Finally, the three-way interaction between BEM, leader sex, and leader strength (or sensitivity) was entered into the third step.

Strength and sensitivity

To address Hypotheses 1 and 2, just related to leader strength and sensitivity, we examined main effects of leader strength and sensitivity and the two-way interactions between leader sex and leader strength (or sensitivity) in the models. Examining strength, leader strength was

Table 4
Zero-order correlations among study variables from Study 3

	M	SD	1	2	3	4	5	6	7
1. Participant sex	0.44	0.50	—						
2. Sex-type	1.50	0.50	.21*	—					
3. Boss’s sex	0.29	.458	.08	.03	—				
4. Strength	3.58	1.58	-.02	.01	-.04	—			
5. Sensitivity	3.67	1.48	-.21*	.02	.20*	.20*	—		
6. Likeability	4.88	1.59	-.09	-.01	-.06	.65***	.50***	—	
7. Effectiveness	4.77	1.56	-.10	.01	.02	.69***	.19*	.58***	—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 109$. Sex is coded as 0, male; 1, female. Sex-type is coded as 1, Masculine; 2, Feminine.

positively related to both leader likeability ($\beta = .64$, $t(105) = 8.84$, $p < .001$) and effectiveness ($\beta = .66$, $t(105) = 9.67$, $p < .001$, Table 5). In partial support of Hypothesis 1, that leader strength will be positively related to likeability and effectiveness for male leaders and negatively for female leaders, leader strength interacted with leader sex to impact effectiveness ($\beta = -.33$, $t(102) = -2.27$, $p < .05$), but not likeability ($\beta = .13$, $t(102) = .81$, $p > .05$). To explain the significant interaction between leader sex and strength on effectiveness, the relationship between strength and effectiveness was stronger for the male leaders ($r(77) = .77$, $p < .001$) than female leaders ($r(32) = .49$, $p < .01$). Although this cor-

relation was extremely strong for both sexes (and likely represents a certain level of halo-bias and same source bias), the fact that the relationship is stronger for male leaders than female leaders is still informative. However, the relationship is positive rather than negative for female leaders, in opposition to our hypothesis.

Examining the effects for sensitivity, there was again a main effect of leader sensitivity on both likeability ($\beta = .56$, $t(105) = 6.28$, $p < .001$) and effectiveness ($\beta = .20$, $t(105) = 1.98$, $p < .05$, Table 5). Hypothesis 2, that leader sensitivity will be positively related to likeability and effectiveness for female leaders and negatively for male leaders, was only partially supported

Table 5

Four hierarchical regressions examining the main effects and interactions of follower sex-type, leader sex, and leader strength or sensitivity on perceptions of liking and effectiveness from Study 3

	B	t		B	t
DV = Liking			DV = Liking		
<i>Step 1</i>			<i>Step 1</i>		
Sex-type	-0.05	-0.23	Sex-type	-0.04	-0.17
Leader sex	-0.10	-0.41	Leader sex	-0.57	-1.96*
Strength	0.64	8.84***	Sensitivity	0.56	6.28***
<i>Step 2</i>			<i>Step 2</i>		
Sex-type	0.36	0.60	Sex-type	0.29	0.42
Leader sex	-1.38	-1.43	Leader sex	-2.31	-1.91
Strength	0.83	3.65***	Sensitivity	0.79	2.77**
Leader sex \times strength	0.13	0.81	Leader sex \times sensitivity	0.06	0.33
Sex-type \times strength	-0.16	-1.09	Sex-type \times sensitivity	-0.17	-0.94
Leader sex \times sex-type	0.55	1.09	Leader sex \times sex-type	0.97	1.68
<i>Step 3</i>			<i>Step 3</i>		
Sex-type	0.16	0.24	Sex-type	0.26	0.31
Leader sex	-2.24	-1.18	Leader sex	-2.47	-0.99
Strength	0.76	2.78**	Sensitivity	0.78	2.25*
Leader sex \times strength	0.37	0.75	Leader sex \times sensitivity	0.10	0.18
Sex-type \times strength	-0.11	-0.60	Sex-type \times sensitivity	-0.16	-0.71
Leader sex \times sex-type	1.13	0.93	Leader sex \times sex-type	1.08	0.68
Leader sex \times sex-type \times strength	-0.16	-0.52	Leader sex \times sex-type \times sensitivity	-0.03	-0.07
DV = Effectiveness			DV = Effectiveness		
<i>Step 1</i>			<i>Step 1</i>		
Sex-type	-0.00	-0.02	Sex-type	0.02	0.05
Leader sex	0.16	0.65	Leader sex	-0.07	-0.22
Strength	0.66	9.67***	Sensitivity	0.19	1.98*
<i>Step 2</i>			<i>Step 2</i>		
Sex-type	-0.08	-0.15	Sex-type	0.10	0.13
Leader sex	0.82	0.91	Leader sex	-3.07	-2.30*
Strength	0.77	3.64	Sensitivity	0.09	0.27
Leader sex \times strength	-0.33	-2.27*	Leader sex \times sensitivity	0.56	2.69**
Sex-type \times strength	-0.01	-0.03	Sex-type \times strength	-0.05	-0.25
Leader sex \times sex-type	0.33	0.71	Leader sex \times sex-type	0.54	0.84
<i>Step 3</i>			<i>Step 3</i>		
Sex-type	-0.19	-0.28	Sex-type	1.23	1.38
Leader sex	0.36	0.21	Leader sex	2.39	0.89
Strength	0.73	2.90**	Sensitivity	0.57	1.52
Leader sex \times strength	-0.20	-0.44	Leader sex \times sensitivity	-0.83	-1.31
Sex-type \times strength	0.02	0.14	Sex-type \times sensitivity	-0.38	-1.57
Leader sex \times sex-type	0.64	0.56	Leader sex \times sex-type	-3.15	-1.84
Leader sex \times sex-type \times strength	-0.09	-0.30	Leader sex \times sex-type \times sensitivity	0.94	2.31*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 55$. Sex is coded as 0, male; 1, female.

such that there was only a leader sex by sensitivity interaction for effectiveness ($\beta = .56$, $t(102) = 2.69$, $p < .01$), but not for likeability ($\beta = .06$, $t(102) = 0.33$, $p > .05$). The relationship between sensitivity and effectiveness was positive and statistically significant for female leaders ($r(32) = .60$, $p < .001$) but not statistically significant for male leaders ($r(77) = .01$, $p > .05$). Sensitivity has a strong impact on effectiveness for female leaders but was not significantly related to the effectiveness of male leaders, suggesting that female leaders need to be both strong and sensitive in order to be effective, while male leaders need only be strong. Again, contrary to our hypothesis the relationship was positive, although non-significant.⁴

Sex-type

Next, we tested Hypotheses 3 and 4, that individuals who are feminine will more strongly endorse the female gender norm for female leaders and individuals who are masculine will more strongly endorse the masculine gender norm for male leaders by examining the three-way interaction between follower sex-type, leader sex, and leader strength (or sensitivity). For the dependent variable of likeability, neither the three-way interaction for strength nor sensitivity was statistically significant ($ps > .05$). For effectiveness, the three-way interaction for strength was not statistically significant, but the three-way interaction between leader sensitivity, leader sex, and follower sex-type was statistically significant ($\beta = .94$, $t(101) = 2.31$, $p < .05$, Table 5).

To explore the interaction, the correlations between sensitivity and effectiveness were examined separately for masculine and feminine individuals with male and female bosses. For male leaders, the correlation between sensitivity and effectiveness was not statistically significant for either masculine ($r(39) = .17$, $p > .05$) or feminine individuals ($r(38) = -.17$, $p > .05$). This is not surprising given the non-significant relationship between sensitivity and effectiveness for male leaders. For female leaders, the correlation between sensitivity and effectiveness was not significant for masculine individuals ($r(15) = .34$, $p > .05$) but was for feminine individuals ($r(17) = .88$, $p < .001$). Therefore, Hypothesis 4 was partially supported such that feminine individuals more strongly endorsed the feminine stereotype (sensitivity) for female leaders in terms of effectiveness, but not in terms of likeability. Hypothesis 3 was not supported as there were no effects for masculinity.⁵

⁴ The three-way interactions between strength, sensitivity, and leader sex on effectiveness and likeability were also non-significant.

⁵ Hypotheses 3 and 4 were also tested using participant sex rather than sex role, but there were no significant two-way or three-way interactions for sex on either of the outcomes.

Discussion

Study 3 provided generalizability of the effects from Study 2. We found that strength was more important to perceptions of effectiveness for male leaders than female leaders while sensitivity was more important to the effectiveness of female leaders than male leaders. Unlike Study 2, leader sex did not interact with strength or sensitivity to impact liking. The disparity in findings between the two studies could be explained by the separation of strength and sensitivity into two variables (so being high in one does not mean being low in the other). Alternatively, it could be that because the participants in this study actually knew the leaders who they were rating, sex may be less important to liking than other factors. Stereotypes become less important when raters have actual behavior on which to focus when making ratings (Fiske & Taylor, 1991). For example, research has shown that biases in performance ratings for women are diminished when raters are instructed to recall specific behaviors before making their ratings (Bauer & Baltes, 2002).

The findings from this study are in contrast to the expectations of role congruity theory, which would suggest that sensitive male leaders and strong female leaders should be judged negatively (Eagly & Karau, 2002). Instead we found positive main effects for both strength and sensitivity on ratings of likeability and effectiveness. The effects extended to both sexes, although the effects of leader sensitivity on effectiveness were not significant for male leaders. Leadership categorization theory (Lord & Maher, 1993; Lord et al., 1984) would suggest that both of these positive prototype dimensions should be related to ratings of leader effectiveness and likeability for all leaders. Further, as noted by Anderson et al. (2006), expectancy violation theory (Jussim, Coleman, & Lerch, 1987), would also suggest that when individuals adopt positive behaviors (such as strength and sensitivity) that violate stereotypes, they are evaluated particularly well.

Therefore, based on these findings, in conjunction with those from Study 2, we propose that it is acceptable for leaders to adopt positive, albeit gender-inconsistent, behaviors as long as they do not fail to exhibit gender consistent behavior. In other words, it is fine for a sensitive female to be strong, but if she is strong and not sensitive she is evaluated negatively.

Further, we found that sex-type impacted the evaluations of gender consistent behavior such that feminine individuals' perceptions of their female leaders' effectiveness was impacted by the leaders' sensitivity. Masculine individuals did not see sensitivity as being related to their leader's effectiveness. Moreover, neither masculine nor feminine individuals rated sensitivity as being important to their leader's effectiveness when that leader was a man. These findings are consistent with gender schema theory (Bem, 1981).

Specifically, these findings fit the prescriptive bias that one's schema impacts his or her judgments about how others *should* behave (Kohlberg, 1966). Feminine individuals expect that other women should be feminine in order to be effective. On the other hand, the individuals' sex-type did not create a descriptive bias in which they would expect others to be similar to themselves. That is, masculine individuals did not rate their leaders (or male leaders) as more strong than feminine individuals and feminine individuals did not rate their leaders (or female leaders) as being more sensitive. It is likely that because the participants were rating their actual leaders their judgments were more based on behavioral observation than schematic processing. As stated, individuals are more likely to rely on stereotypes when little other information is available than when they are in an information rich processing situation (Fiske & Taylor, 1991).

Finally, although this study did provide a certain level of external validity by using individuals' real leaders, doing so raises concerns over the validity of the findings. Specifically, having participants rate their bosses on the leadership prototype dimensions and the outcome variables raises concern over same source bias. It is also possible that this same source bias resulted in the lack of sex interactions on the dependent variable of liking. Similarly, it is possible that participants' liking and perceptions of effectiveness of their leader affected their ratings of strength and sensitivity. Yet this study, paired with the previous study, does offer evidence that leader strength and sensitivity are related to perceptions of likeability and effectiveness. Further, that leader sex interacted with strength and sensitivity to impact effectiveness ratings suggests that the findings are not simply due to response bias.

Study 4: Sex-type identification and prototypes

Thus far, we have looked at the generation of leadership prototype dimensions for male and female leaders and examined the effects of prototype violation and confirmation on judgments of effectiveness and likeability. As a final step, we examine the extent to which individuals' rate each of the prototype dimensions as being characteristic of male and female leaders and effective leaders. In addition, while the previous studies focused on words to represent the prototype dimensions, in this final study paragraphs were used to ensure that all participants had a similar understanding of the prototype dimensions. Although we only expect differences between male and female leaders on the gendered prototype dimensions, all were included in this study.

Hypothesis 1a: Agentic prototype dimensions (strong, masculine, tyrannical) will be perceived as more characteristic of male leaders than female leaders.

Hypothesis 1b: Communal prototype dimension (sensitivity) will be perceived as more characteristic of female leaders than male leaders.

Moreover, we wanted to examine the effects of individual's sex-type on their ratings of how typical each prototype dimension is of male and female leaders. In Study 3, we examined the impact of stereotype consistent leader prototype dimensions (sensitivity-female leader, strength-male leader) on ratings of effectiveness and likeability. We found that feminine sex-types rated the relationship between sensitivity and effectiveness for female leaders to be stronger than masculine sex-types. In this study, we include the other two masculine prototype dimensions of masculinity and tyranny. We expect that masculine individuals will perceive the masculine prototype dimensions as being more prototypical of male leaders whereas feminine individuals will perceive the female prototype dimension as being more prototypical of female leaders.

Hypothesis 2a: Masculine sex-type individuals will perceive that male leaders are more masculine, strong, and tyrannical than feminine sex-typed individuals.

Hypothesis 2b: Feminine sex-typed individuals will perceive that female leaders are more sensitive than masculine sex-typed individuals.

In addition to expecting that sex-type will influence the extent to which behaviors are prototypical of male or female leaders, we expect that sex-type will affect individuals' prescriptive perceptions of what makes a leader effective (Bem, 1981). Specifically, we expect masculine individuals to perceive agentic behaviors (strength, masculinity, tyranny) to be more effective than feminine individuals. That is not to say that masculine individuals will perceive tyranny and masculinity to be particularly effective (Epitropaki & Martin, 2004), but they will perceive them to be more effective than will a feminine individual. Feminine individuals should perceive communal behavior (sensitivity) to be more effective than masculine individuals.

Hypothesis 3a: Masculine sex-typed individuals will perceive that effective leaders are more masculine, strong, and tyrannical than feminine sex-typed individuals.

Hypothesis 3b: Feminine sex-typed individuals will perceive that effective leaders are more sensitive than masculine sex-typed individuals.

Finally, although we do not expect that dedication, intelligence, charisma, or attractiveness are particularly agentic or communal, we will examine the effects of participants' sex-type on their ratings of how prototypical

these characteristics are for male leaders, female leaders, and effective leaders.

Research Question: How will sex-type affect one's ratings of the prototypicality of dedication, intelligence, charisma, or intelligence for male and female leaders and effective leaders?

Method

A power analysis was conducted to determine how many participants would be needed to address the hypotheses related to sex-type. Cohen's (1988) standard of a medium effect size was used. For a power of .80 (i.e. a 20% chance of committing a Type 2 error) and a $p < .05$, 63 participants are needed. Participants consisted of 62 management students from a large university in the rocky mountain region. All participants were currently employed and they ranged in age from 20 to 42 ($M = 26.90$, $SD = 4.91$). There were slightly more women ($n = 32$) than men ($n = 27$), with three participants failing to report their sex.

Each participant completed a survey in which they were asked to indicate the extent to which they found each of the 8 prototypical leadership dimensions to be true of leaders in general, effective leaders, male leaders, and female leaders ranging from 1 indicating "Never or almost never true" to 7 indicating "Always or almost always true." A short paragraph was used to describe what was meant by each leadership dimension so that all participants had the same understanding (Appendix B). Participants also completed the Sex Role Inventory (Bem, 1974) and it was scored in the same way as in Study 3. The internal consistency for the masculine subscale was ($\alpha = .83$), and was ($\alpha = .61$) for the femininity scale. Because of the low internal consistency for the femininity scale, one item, "tender" was removed, increasing the alpha level ($\alpha = .75$).

Results

Means and standard deviations of each of the prototype dimensions are reported in Table 6. Participants rated each prototype dimension on how characteristic it was of male leaders, female leaders, effective leaders, and leaders in general (although leaders in general were not examined in the hypotheses). The prototype dimension that was seen as the most characteristic of effective leaders was dedication, followed by intelligence, charisma, strength, sensitivity, attractiveness, masculinity, and tyranny. This ordering of variables is relatively consistent with what was found in Study 1 (Table 6).

Table 6 also includes the means of each variable by participant sex-type (masculine, feminine). All variables conformed to the normal distribution, although there were eight extreme outliers (more than three standard

Table 6
Means and standard deviations of each of the prototype dimensions for Study 4 overall and by participant sex-type

	<i>M</i>	<i>SD</i>	Masculine		Feminine	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Strength</i>						
Leaders in general	5.23	1.00	5.39	1.20	5.07	0.73
Effective leaders	5.33	1.02	5.45	1.21	5.20	0.79
Male leaders	5.23	0.95	5.23	1.18	5.23	0.67
Female leaders	4.47	1.17	4.52	1.36	4.42	1.00
<i>Sensitivity</i>						
Leaders in general	3.74	1.09	4.00	1.12	3.48	1.00
Effective leaders	4.29	1.23	4.23	1.23	4.35	1.25
Male leaders	3.19	1.16	3.16	1.13	3.23	1.20
Female leaders	4.90	0.97	4.68	0.91	5.13	0.99
<i>Dedication</i>						
Leaders in general	5.65	1.12	5.87	1.23	5.42	0.96
Effective leaders	6.22	0.79	6.50	0.62	5.94	0.85
Male leaders	5.15	0.99	5.10	1.16	5.19	0.79
Female leaders	5.06	0.94	5.03	1.05	5.10	0.83
<i>Charismatic</i>						
Leaders in general	5.06	1.32	5.39	1.17	4.74	1.39
Effective leaders	5.56	1.15	5.65	1.02	5.47	1.28
Male leaders	4.59	1.06	4.81	1.08	4.37	1.02
Female leaders	4.65	0.91	4.68	1.01	4.61	0.80
<i>Intelligent</i>						
Leaders in general	5.31	1.20	5.42	1.36	5.19	1.01
Effective leaders	5.73	1.13	5.74	1.24	5.71	1.04
Male leaders	4.97	0.85	4.94	0.89	5.00	0.82
Female leaders	5.05	0.82	5.03	0.84	5.06	0.81
<i>Attractive</i>						
Leaders in general	4.37	1.27	4.48	1.09	4.26	1.44
Effective leaders	4.03	1.47	4.00	1.29	4.06	1.65
Male leaders	4.15	1.07	4.16	1.00	4.13	1.15
Female leaders	4.70	1.18	4.87	1.12	4.54	1.23
<i>Masculine</i>						
Leaders in general	3.34	1.32	3.55	1.55	3.13	1.02
Effective leaders	2.97	1.29	3.35	1.45	2.58	0.99
Male leaders	4.19	1.33	4.45	1.46	3.94	1.15
Female leaders	2.68	1.45	3.23	1.59	2.13	1.06
<i>Tyrannical</i>						
Leaders in general	3.45	1.39	3.45	1.39	3.45	1.41
Effective leaders	2.35	1.29	2.68	1.25	2.03	1.28
Male leaders	3.97	1.43	4.10	1.56	3.84	1.29
Female leaders	3.25	1.30	3.19	1.3	3.30	1.29

Note. $n = 62$.

deviations from the mean) that were replaced with the grand mean. These outliers were on strength for: leaders in general, effective leaders, and male leaders (one each). In addition, there were two outliers for how prototypical dedication was for effective leaders. There were also two outliers for charisma (for effectiveness and male leaders) and one outlier for how prototypical attractiveness was for male leaders.

Hypotheses 1a, 1b, 2a, 2b were tested using a $4 \times 2 \times 2$ repeated measures ANOVA with prototype dimension (sensitivity, strength, masculinity, and tyranny) and leader sex (male, female) as the within sub-

jects variables and participant sex-type (masculine, feminine) as the between subjects variable (Table 7). Hypotheses 1a and 1b suggested that agentic prototype dimensions (strong, masculine, tyrannical) will be perceived as more characteristic of male leaders than female leaders and the communal prototype dimension (sensitivity) will be perceived as more characteristic of female leaders than male leaders. To test these hypotheses, we examined the two-way interaction between leader prototype dimension and leader sex. The interaction was statistically significant (Wilks' $\lambda = .29$, $F(3, 58) = 47.06$, $p < .001$, $\eta^2 = .71$, Table 7).

To test our specific hypotheses comparing sensitivity to the three agentic prototype dimensions (strength, masculinity, tyranny) a Helmert interaction contrast was conducted. Helmert contrasts compare the lowest level of a categorical variable with the mean of all of the subsequent levels. In this case, it we compared sensitivity to mean of the three agentic prototype dimensions. The interaction contrast tests the extent to which the difference between sensitivity and the agentic prototype dimensions differs by leader sex. Planned contrasts can be used to reduce Type 1 error rates, because they reduce the total number of tests conducted (Winer, 1962). The test was statistically significant ($F(1, 60) = 144.08$, $p < .001$, $\eta^2 = .71$) and the means were in the expected directions (Table 6). Female leaders were seen as more sensitive ($M = 4.90$, $SD = .97$) than male leaders ($M = 3.19$, $SD = 1.16$). Combining the means of the agentic prototype dimensions, male leaders were seen as more strong, masculine, and tyrannical ($M = 4.46$, $SD = .83$) than female leaders ($M = 3.46$, $SD = .95$, Fig. 2).

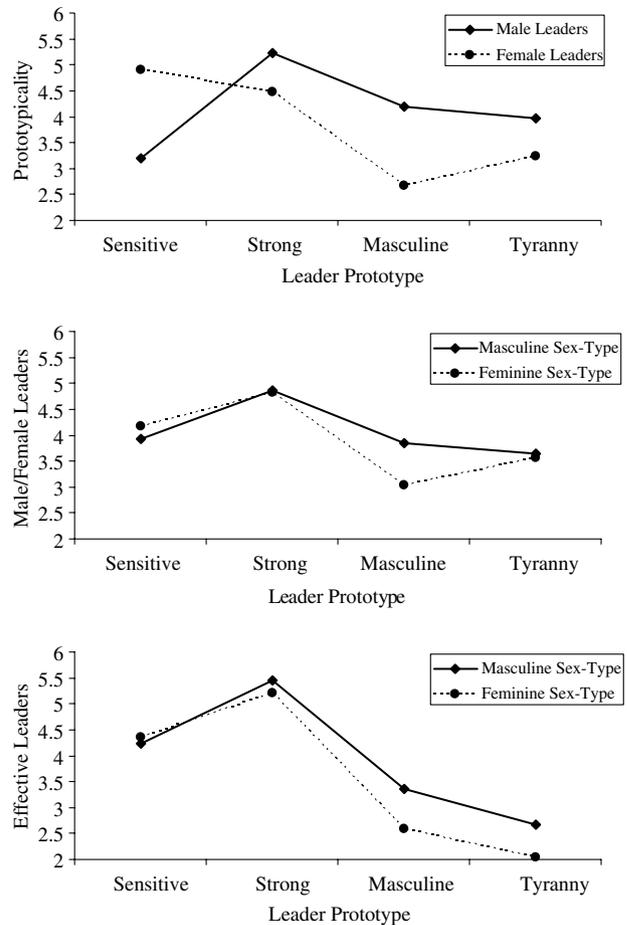


Fig. 2. Repeated measures ANOVA results of prototype, leader sex, and participant sex-type.

Table 7
Effects sex role on perceptions of how characteristic each leader prototype dimension is among leaders in general, successful leaders, male leaders, and female leaders for Study 4

	Wilks' λ	F	η^2
<i>Prototype dimensions = Sensitivity, strength, masculinity, tyranny</i>			
Prototype	.42	26.41***	.58
Prototype \times rater sex-type	.81	4.54**	.19
Leader sex	.74	21.03***	.26
Leader sex \times rater sex-type	1.00	0.01	.00
Prototype \times leader sex	.29	47.06***	.71
Prototype \times rater sex-type \times leader sex	.89	2.30	.11
Rater sex-type	—	0.91	.02
<i>Prototype dimensions = Dedicated, charisma, intelligent, attractiveness</i>			
Prototype	.68	9.09***	.32
Prototype \times rater sex-type	.96	0.71	.04
Leader sex	.87	9.26**	.00
Leader sex \times rater sex-type	1.00	0.00	.00
Prototype \times leader sex	.81	4.67**	.19
Prototype \times rater sex-type \times leader sex	.92	1.74	.08
Rater sex-type	—	0.23	.00

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 62$.

Sex-type

Hypotheses 2a and 2b suggested that masculine sex-typed individuals will perceive that male leaders are more masculine, strong, and tyrannical than feminine sex-typed individuals whereas feminine sex-typed individuals will perceive that female leaders are more sensitive than masculine sex-typed individuals. We tested this hypothesis with the three-way interaction between leader prototype, leader sex, and follower sex-type. The three-way interaction was not statistically significant (Wilks' $\lambda = .89$, $F(3, 58) = 2.30$, $p > .05$, $\eta^2 = .11$). However, the two-way interaction between sex-type and prototype dimension was statistically significant (Wilks' $\lambda = .81$, $F(3, 58) = 4.54$, $p < .001$, $\eta^2 = .19$). Moreover, the Helmert interaction contrast was statistically significant ($F(1, 60) = 5.70$, $p < .05$, $\eta^2 = .09$, Tables 6 and 7). Feminine individuals rated male and female leaders (the average of these two variables) as more sensitive ($M = 4.18$, $SD = .82$) than did masculine individuals ($M = 3.92$, $SD = .85$). Combining the means of the agentic prototype dimensions, masculine individuals rated male and female leaders as being more strong, masculine, and tyrannical ($M = 4.12$, $SD = .89$) than did feminine individuals ($M = 3.81$, $SD = .68$).

Hypotheses 3a and 3b suggested that masculine sex-typed individuals will perceive that effective leaders are more masculine, strong, and tyrannical than feminine sex-typed individuals, whereas feminine sex-typed individuals will perceive that effective leaders are more sensitive than masculine sex-typed individuals. To test this hypothesis we conducted an additional 4×2 Repeated Measures ANOVA with participants' ratings of how characteristic our four focal prototype dimensions (sensitivity, strength, masculinity, tyranny) are of effective leaders as the within-subjects variable and sex-type as the between subjects variable. Again, the Helmert contrast was examined. There was a main effect for the within-subjects variable of prototype dimension (Wilks' $\lambda = .17$, $F(3,58) = 91.67$, $p < .001$, $\eta^2 = .83$) and an interaction between sex-type and prototype dimension (Wilks' $\lambda = .87$, $F(3,58) = 2.80$, $p < .05$, $\eta^2 = .13$). In addition, the Helmert interaction contrast was statistically significant ($F(1,60) = 4.92$, $p < .05$, $\eta^2 = .08$). Feminine individuals rated effective leaders as more sensitive ($M = 4.35$, $SD = 1.25$) than did masculine individuals ($M = 4.23$, $SD = 1.23$). Masculine individuals rated effective leaders as being more strong, masculine, and tyrannical ($M = 3.83$, $SD = .91$) than did feminine individuals ($M = 3.27$, $SD = .68$).

Research question

Finally, to test the research question, how will sex-type affect one's ratings of the prototypicality of dedication, intelligence, charisma, or intelligence for male and female leaders, and effective leaders, we conducted an addition 4 (dedication, charisma, intelligence, attractiveness) $\times 2$ (male leader, female leader) $\times 2$ (masculine, feminine) repeated measures ANOVA. There was a significant interaction between leadership prototype dimension and leader sex (Table 7). Fisher's LSD post hoc tests revealed that there was not a significant difference between male and female leaders on dedication ($t(61) = .96$, $p > .05$), intelligence ($t(61) = -1.15$, $p > .05$), or charisma ($t(61) = -.59$, $p > .05$, means in Table 6). There was a significant difference for attractiveness ($t(61) = -3.92$, $p < .001$) such that male leaders ($M = 4.15$, $SD = 1.07$) were seen as less attractive than female leaders ($M = 4.70$, $SD = 1.18$). There was no interactive effect or main effect of sex-type on ratings of male and female leaders' dedication, charisma, intelligence, or attractiveness (Table 7).

Further, to explore the impact of sex-type on effectiveness ratings of dedication, charisma, intelligence, attractiveness a final repeated measures ANOVA with prototype dimension as the between subjects variable and sex-type as the between subjects variable. There was a main effect of prototype dimension (Wilks' $\lambda = .29$, $F(3,58) = 46.49$, $p < .001$, $\eta^2 = .71$) such that dedication was seen as the most prototypical characteristic of effective leaders, followed by intelligence, cha-

risma, and attractiveness (Table 6). The interaction between sex-type and prototype dimension was not statistically significant (Wilks' $\lambda = .93$, $F(3,58) = 1.57$, $p > .05$, $\eta^2 = .08$) nor was the main effect of sex-type ($F(1,60) = .77$, $p > .05$, $\eta^2 = .01$). Therefore, in response to the research question, sex-type had no detectable effect on ratings of dedication, intelligence, charisma, or attractiveness for male and female leaders or effective leaders.

Discussion

The findings from this fourth study were quite consistent with the findings from the previous three studies. Like Study 1, participants reported that male leaders were more likely to demonstrate agentic leader prototype dimensions (strength, masculinity, tyranny), whereas female leaders were more likely to demonstrate the communal prototype dimension of sensitivity. There were no differences in expectations for male and female leaders in terms of being dedicated, intelligent, or charismatic. There was one unexpected difference such that attractiveness was rated as more characteristic of female leaders than male leaders. This could be an artifact of the paragraphs used, as there were no differences in the generation of attractiveness for male and female leaders in Study 1.

However, our results compliment recent work by Forsterling, Preikschas, and Agthe (2007) who found that attractiveness impacted ratings of men and women differently. Specifically, they found that women evaluating an attractive woman used a derogatory attribution (e.g., luck) but when they evaluated an unattractive woman they used a flattering attribution (e.g., ability). They followed an opposite pattern when evaluating men. Our finding that participants rated attractiveness as more characteristic of female leaders may be a result of the participants' expectations that attractive women are more "lucky," and therefore may find themselves in a leadership role whereas male leaders are more likely to be there because of their ability.

In addition, the findings highlight the potential for sex-type to impact prescriptive and descriptive bias in the evaluation of leaders. In terms of the descriptive bias, feminine individuals reported that male and female leaders were more sensitive and less agentic (strong, masculine, tyrannical) than masculine individuals. We expected differences by leader sex, such that feminine individuals would have particularly strong expectations for female leaders, and masculine individuals would have particularly strong expectations for male leaders. This was not the case. Instead, the descriptive bias was the same for male and female leaders. However, in terms of the prescriptive bias, feminine individuals also reported that effective leaders were more sensitive, whereas masculine individuals reported that effective

leaders were more agentic. There were no effects of sex-type on dedication, intelligence, attractiveness, or charisma.

General discussion

The purpose of these studies was to understand how today's prototypes of leaders are complementary to sex roles of men and women, and to understand the extent to which violations of sex roles impact ratings of leadership. We sought to integrate research on leadership prototypes with that of gender stereotypes in a leadership domain by using four studies that combine qualitative, experimental, and naturalistic approaches. Together, the findings from these four studies demonstrate that the leadership prototype dimensions differ in importance for male and female leaders, supporting role congruity theory, and underscoring the importance of gender in leader prototypicality. In addition, we found that individuals' sex-type (masculine or feminine) affected their beliefs about leaders' gender consistent behaviors.

As expected, Study 1 showed that strength, masculinity, and tyranny were more central to the male leadership role than the female leadership role, whereas the opposite was true for sensitivity. All of the prototype dimensions that were generated more frequently for male leaders than for female leaders were more agentic in nature and the prototype dimension that was generated more frequently for female leaders than male leaders was more communal in nature. Further, the fact that there were no differences in the number of times the non-gendered prototype dimensions (dedication, charisma, attractiveness, intelligence) were generated supports the idea that observed differences were due to gender stereotypes, rather than simply response bias in favor of male leaders. These findings were confirmed in Study 4 using paragraphs describing each of the prototype dimensions. Participants indicated the extent to which that prototype dimension is true for male and female leaders. Just as in Study 1, strength, masculinity, and tyranny were rated as more characteristic of male leaders than female leaders, whereas sensitivity was rated as more characteristic of female leaders than male leaders. There were no differences between male and female leaders on dedication, intelligence, or charisma, although female leaders were seen as more physically attractive.

Of the four gender differentiated leader prototype dimensions, two of them, masculinity and tyranny are part of a factor representing an anti-leadership prototype (Epitropaki & Martin, 2004). As such, we only focused on strength and sensitivity in Studies 2 and 3. In these studies, we examined the effects of being strong and sensitive on evaluations of male and female leaders. We found that both strength and sensitivity were important to perceptions of leader effectiveness, although

strength was more important than sensitivity. Female leaders were seen as ineffective when they failed to exhibit either strength or sensitivity, whereas male leaders were only seen as ineffective when they failed to exhibit strength. Although a female leader exhibiting more masculine prototype dimensions should result in prescriptive bias (when a woman adopts a more masculine leadership), our data did not support this expectation in Studies 2 and 3. Negative perceptions arose, however, when an expected behavior was *not* demonstrated. Thus, it is not the addition of gender-inconsistent behavior that was problematic, but the subtraction of gender-consistent behavior that gave rise to negative evaluations. When female leaders were not sensitive or male leaders were not strong, they were evaluated negatively.

Descriptive bias was also found for female leaders in Studies 2 and 3. Descriptive bias results from the lack of fit between the feminine role and the leader role. Specifically, when women were low in strength they were perceived negatively. This finding demonstrates a double standard for men and women in leadership roles. While male leaders need only demonstrate masculine leader behavior, female leaders must exhibit both masculine and feminine leader behaviors in order to be perceived as effective. This is similar to what Heilman and Chen (2005) found with respect to altruistic behavior in the workplace. They found that when women did not behave altruistically they were evaluated negatively because they failed to demonstrate gender consistent behavior. However, when men failed to behave altruistically it had no impact on their evaluations because altruism is not part of the male sex role.

The results from these studies support the idea that when all else is equal, male leaders are generally perceived as more effective than female leaders (Study 2). The fact that male leaders were generally perceived as more effective, coupled with the added demands that female leaders have in terms of their behavior, may explain why fewer women reach top leadership positions. It is also problematic that strength, the more masculine leadership prototype, appeared more important than sensitivity, the more feminine leadership prototype, to overall perceptions of leadership effectiveness. The sex disparities appeared to be more pronounced for ratings of leadership effectiveness than they were for ratings of likeability. In fact, contrary to the expectations of role congruity theory (Eagly & Karau, 2002), we did not find consistent effects for likeability. In Study 2, sensitive female leaders were liked as well as strong female leaders, although they were liked more than sensitive male leaders. In Study 3, strength and sensitivity did not interact with leader sex to affect likeability.

The conflicting findings in Studies 2 and 3 can be explained mostly by the difference in context and information environment. In Study 2, because participants

were presented vignettes describing the behavior of hypothetical leaders, we might expect that stereotype processing would be particularly strong. In Study 3, the participants were rating their own leaders with whom they have day-to-day interactions. The richness of the real world context in dissipating some of this stereotypic processing of information may explain some of the differences. A person knows how his or her “strong” boss actually behaves and how effective he or she actually is. Heilman and Haynes (2005) found that women were given less credit for group work, when it was more ambiguous within a task what their actual output was. According to their research, explicit information about individual performance, non male sex-typed work, and past successful performance all prevent women’s performance in work groups from being discounted (Heilman & Haynes, 2005).

Moreover, in Studies 3 and 4 we examined the impact of follower sex-type on ratings of male and female leaders. In Study 3, participants self-reported their sex-type (masculine or feminine) and rated their actual leader on strength, sensitivity, effectiveness, and likeability. We found that feminine sex-typed individuals perceived their female leader to be effective if she was sensitive. However, for feminine sex-typed individuals, sensitivity was unrelated to ratings of male leaders. Further, masculine sex-typed individuals reported no relationship between sensitivity and effectiveness for male or female leaders. This finding is consistent with gender schema theory. Specifically, these findings demonstrate a prescriptive bias such that feminine individuals expect that their female leaders *should* also be sensitive (Kohlberg, 1966). Otherwise, they evaluate them negatively. However, we also expected the relationship between leader strength and effectiveness to be moderated by follower sex-type. Instead, we found that both masculine and feminine individuals expected their male and female leaders to be strong in order to be effective. This finding is consistent with the previous findings that all leaders need to be strong to be effective.

Sex-type did not impact the extent to which people saw their leaders as being strong and sensitive in general, in Study 3. This is likely because stereotypes have less of an impact on perceptions of behavior when other information is available (Fiske & Taylor, 1991), and participants in that study were rating their actual leaders. Therefore, in Study 4, we examined the effects of sex-type on perceptions of fake leaders, or paper leaders. In Study 4, feminine individuals rated leaders (male and female) as being more sensitive and less strong, masculine, and tyrannical than masculine individuals. Feminine individuals also rated sensitive leaders as being more effective and strong, masculine, and tyrannical leaders as being less effective than masculine individuals.

Implications

There are both practical and theoretical implications of this research. Theoretically, this research expands our understanding of leadership categorization theory, by demonstrating that individuals hold gender-specific leadership prototypes. The findings further suggest that these differences in unconscious prototypes can result in subtle discrimination against female leaders. The current study also has implications for leadership in general by exploring characteristics that are associated with effective leadership for men and women. Although some research has focused on differences in male and female emergence as leaders and leadership style, the idea of sex in cognitive theories of leadership has rarely been explored (cf., Hall, Workman, & Marchioro, 1998).

We suggest that leader sex needs to be examined in leadership research and we provide an explanation for the observed disparity between men and women in leadership roles. Although previous research has looked for differences in leadership behavior (e.g., Morrison et al., 1987), the current research suggests that the difference between male and female leaders is not necessarily in their behavior, but in the interpretation of that behavior. In terms of practical implications, female leaders who are prone to more autocratic and democratic ways of leading (Eagly & Johnson, 1990) should also be aware of the importance of demonstrating strength to their followers. Further, although meta-analytic research suggests that female leaders described as exhibiting masculine styles of leadership are evaluated less favorably than male leaders exhibiting those styles (Eagly et al., 1992), it may not be the presence of the masculine behavior that results in the devaluation of female leaders, but the absence of feminine behaviors. Female leaders need to include masculine behaviors, such as appearing strong to their followers, while remaining sensitive to those followers’ needs.

This study adds to existing research that has shown the effects of perceptual biases based on stereotypes of gender or race on information processing for many personnel functions, including selection, promotion, and performance management (Bauer & Baltes, 2002). The current studies show that these biases also come into play when evaluating women’s leadership. Recent research has attempted to understand when these gender biases occur and how they can be reduced. For instance, a meta-analysis showed that female and male applicants receive lower ratings when being considered for an opposite-sex-type job, and the difference between ratings of men and women decreased as more job-relevant information is provided (Davison & Burke, 2000). Bauer and Baltes (2002) used a structured free recall intervention strategy to eliminate gender bias in ratings exhibited by raters who endorsed traditional stereotypes toward women. Participants who generated specific

behaviors of an individual's performance showed less bias. Additional research to reduce biased processing of leader behavior is necessary.

It was important in Studies 1 and 4 to reassess earlier findings that showed prototypic leader behaviors are most often assigned to male leaders. As noted by Eagly and Carli (2003), the stereotypes of women and of women leaders have changed over time. A valuable contribution of this research was collecting up-to-date ratings of prototypic behaviors. It is important to note that we found no differences in the generation of non-gendered prototype dimensions: dedication, charisma, and intelligence, for male and female leaders. The exception was that female leaders were perceived as more attractive in Study 4. Female leaders may benefit from adopting the non-gendered prototype dimensions as well. For example, female leaders exhibit more transformational leader behavior than male leaders (Eagly, Johannesen-Schmidt, & van Engen, 2003) and female leaders exhibiting those behaviors are evaluated positively (Eagly et al., 1992).

Limitations and future research

As with any research, there were some limitations to the current work. First, the prototype dimension generation data from Study 1 were gathered from undergraduate business students, raising concern of the generalizability of their ratings. However, we feel that their ideas of leadership will carry forward into the work world and will have a large impact on the types of leaders they will later endorse. Most research suggests that the prototypic behaviors contained in this type of role schema are quite enduring (Dweck, Chiu, & Hong, 1995). The second study utilized a non-student sample, although the participants were rating fictitious leaders about whom they had little information. However, this technique has been used in countless studies (e.g., Ensari & Murphy, 2003; Heilman & Chen, 2005) to understand both recognition-based information processing, such as whether or not a person's behavior is categorized as leader like or prototypic, and inference-based processing, such as when leader behavioral perceptions are heavily influenced by the leader's effectiveness (Lord & Maher, 1993). Further, the findings of that study are complemented by the third study, in which the participants rated their actual leaders.

The context in which participants were asked to judge leader behavior varied across the four studies. Studies 1, 2, and 4 took place in a somewhat context free setting. In Study 1, participants were asked to think of leaders in general, without instructions as to where these leaders would operate or at what level. In Study 2, individuals were asked to think about high level leaders. In Study 3, individuals could rate leaders at various levels within their organizations. The fourth study again asked about

leaders in general and effective leaders. These differences in contexts and information environments somewhat limit the generalizability of the findings, especially if we consider that while women hold many middle management positions (most likely the type rated in Study 3), they are less likely to hold higher level (or more elite) leadership positions. For example, Lyness and Heilman (2006) showed that women were rated less favorably when working in line positions as compared to staff positions. Moreover, in Eagly et al.'s (1992) meta-analysis, women were substantially more effective than men in middle management positions where communal interpersonal skills are highly valued. Future research should pay close attention to differences in context for processing of leadership perceptions (Lord et al., 2001).

Studies 2 and 4 also asked participants to rate leaders in somewhat information poor environments. While other studies using paper and pencil vignette ratings have been quite useful in research on leader perceptions (Lord & Maher, 1993; Lord et al., 1984), Lord and Alliger (1985) found that leadership perceptions in rich information environments such as a group interaction context were less affected by leader prototypic behavior than they were in impoverished information environments. Indeed, Maurer and Lord (1991) showed that both high and low information environments affected leadership perceptions, suggesting that more research is needed in this area.

Social identity theory of leadership suggests that organizational norms provide another influence on perceptions of leadership effectiveness (Hogg, 2001). Hogg asserts that the group prototype for effective leaders varies from group to group and situation to situation (Hogg, Hains, & Mason, 1998). To the extent that a female leader fits the group's idea of the prototypical leader, there will be no conflict between the female role and the role of leader. But if that group holds prototypes that are in conflict with the typical sex role, the leader will be seen as less "leader like" and therefore, less likable and less effective (Hogg et al., 2006). Further, Hogg et al. (2006) found that leader sex interacts with group norms (male or female) to impact the extent to which male or female leaders are seen as effective. Similarly, Eagly and Carli (2003) found that women in male-dominated organizations suffer from gender stereotypes to a greater extent than women from more gender neutral or female-dominated organizations (e.g., nursing). Finally, leaders' self-schema can affect their behavior and how it is perceived (Wofford, Goodwin, & Whittington, 1998). Future research is needed to explore some of these additional issues.

In conclusion, the current research demonstrates (1) that certain leadership prototype dimensions are more effective for male leaders than for female leaders and vice versa, (2) that violating one's sex role can have substantial impacts on perception of likeability and effec-

tiveness, and (3) individuals' sex-type impacts the extent to which they hold stereotypical gendered prototypes. Eagly and Carli (2003) present encouraging evidence suggesting that women have changed, leadership roles have changed, organizations have changed, and the larger culture of the US has changed. However, they provide additional findings which indicate that much remains the same for women in management. Acknowledging that differential perceptions and perhaps biases remain may help reduce their negative effects. In the meantime, men and women are encouraged to demonstrate both strength and sensitivity in order to achieve leadership success.

Appendix A. Strong male leader vignette used in Study 2 (sensitive in parentheses)

Lanitol Inc. Hires New CEO

Associated Press | 07-10-05 |

On Friday, Lanitol Incorporated announced that it has hired John Davenport as its new Chief Executive Officer. Some investors are unsure about the new hire, despite Davenport's 20 years of experience in the industry. Davenport is recognized for having led at least three other retail companies out of financial distress. However, Lanitol is a much larger company than those Davenport has previously led and Lanitol has had a history of problems with its leadership.

In a telephone interview, Davenport responded to questions about how he was going to approach his new position.

"Leaders need to be strong (or sensitive)," said Davenport, who is known for his strength (sensitivity). "Other leaders say that sensitivity (strength) is the key to effective leadership; but I don't think that one always needs to be sensitive (strong) to be a leader. That's the way I will lead Lanitol, despite what my critics say."

Whether Davenport's approach to leadership will succeed at Lanitol remains to be seen.

Appendix B. Paragraphs used in Study 4

Strength: Leaders are strong, bold, and decisive. They are powerful individuals who use their strength to lead their followers.

Sensitivity: Leaders are sensitive, sympathetic, and understanding. They are caring individuals who use their compassion to lead followers.

Dedication: Leaders are dedicated, motivated, and goal oriented. They are devoted individuals who use their drive to lead followers.

Charisma: Leaders are charismatic, inspirational, and enthusiastic. They are dynamic individuals who use their energy to lead followers.

Intelligence: Leaders are intelligent, well educated, and clever. They are wise individuals who use their knowledge to lead followers.

Attractiveness: Leaders are attractive, well-groomed, and well-dressed. They are classy individuals who use their good looks to lead followers.

Masculinity: Leaders are masculine and macho. They are manly individuals who use their masculinity to lead followers.

Tyranny: Leaders are tyrannical, manipulative, and domineering. They are power-hungry individuals who use their demanding nature to lead followers.

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