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Can She Ever Be “The Man”? : The Effect of Gender on Implicit Perceptions of
Leadership Ability in an Applied Hiring Task

by

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Honors Thesis

in

The Department of Psychology

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Abstract

Despite numerous advances in the field of women’s rights and a general decline in explicit discrimination, there still exists a dramatic lack of women in leadership positions across America. This research seeks to expand upon past studies suggesting that there is a basic cognitive incongruity between traditional female and leadership roles which leads ordinarily “unbiased” individuals to perceive women as less suited for leadership positions than men. Thus, this experiment investigates the implicit biases against women leaders by asking if the subtle addition of gender information alters individuals’ initial impressions of leadership capability in an applied hiring task involving resumes, letters of reference, and trait-based evaluations. Results suggest that once gender was made salient through a letter of reference men are evaluated more favorably than women as leaders, as measured by greater difference scores between the initial and post trait questionnaires in terms of their agentic and overall leadership trait scores than females.

Can She Ever Be “The Man”? The Effect of Gender on Implicit Perceptions of Leadership Ability in an Applied Hiring Task

While there are many individuals who would be quick to claim that gender discrimination in the United States is over and done with, recent statistics suggest that women still face distinct disadvantages in the workforce-- particularly within leadership domains. In a world that values “the man” as the epitome of organizational success, there is currently a preponderance of white males in leadership positions across numerous fields such as politics, business, and science. In fact, women make up only 23.4% of the Corporate Executive Officers in this country and less than 3% of the CEOs of Fortune 500 Companies (U.S. Bureau of Labor Statistics, 2006; Catalyst, 2006). In politics, women are more likely to vote than men (and have outnumbered male voters since 1980) yet are greatly outnumbered in governmental offices. For example, in the 2004 general election 67.3 million women came out to vote and 8.8 million more women voted than men (Center for American Women & Politics, 2009). Yet despite women’s remarkably high voter turnout and political involvement, they still made up only 17% of the members of the U.S. Senate and 16.8% of the House of Representatives (CAWP, 2009).

Thus, while the appearance of explicit discrimination directed at women may seem to be on the decline, implicit biases against women still exist. Gender discrimination is simply much more subtle and less openly apparent, as social desirability makes people less likely to openly discriminate against women on the basis of gender. Sczesny & Kuhnen (2004) found evidence to suggest that most people hold some sort of implicit knowledge that tells them that it is not socially acceptable to be biased against someone’s biological sex. Thus, in explicit measures of leadership competence most participants will rate male and female applicants equally, but as cognitive load increases

(tasks become mentally more demanding) they are less able to correct their personal biases consciously and will revert back to stereotypical gender judgments. Additionally, while most people claim to view male and female candidates as equally competent, they are ultimately more likely to select male candidates when given the choice (Supino & Goethals, 2007). Thus, it is essential that modern research starts to examine these implicit biases and their origins.

One of the more popular explanations for implicit biases and how they operate is the idea of schemas, or cognitive frameworks which allow us to organize the world around us according to our past experience. Schemas operate automatically through the unconscious mind by influencing literally millions of split-second decisions and inferences about how we should behave or think in a given situation. Schemas are what tell us to lift our feet when we walk up the stairs, to stay away from man-eating lions, and even what the proper response would be to an infant who is dressed in blue. In particular, gender schemas tell us what it means to be a man or woman (from infancy through adulthood) as well as the appropriate response to the men or women we encounter in any given situation.

Traditional gender schemas tell us that females are better at more communal, caregiver roles while men are much more agentic (capable of exerting self-agency), assertive, strong, and independent (Schlein, 1973; Heilman, Martell, & Simon, 1988). And, like all schemas, gender schemas are very strongly influenced not by past experiences, but also by stereotypes. Stereotypes are thoughts which attribute certain characteristics to all the members of a particular group based on preconceived notions rather than objective reality and they impact not only how groups perceive individuals

but also how individuals perceive themselves (Steele & Aronson, 1995; Bergeron, Block & Echtenkamp, 2006; Davies, Spencer, and Steele, 2005; Hoyt & Simon, 2007; Kray, Thompson, & Galinsky, 2001).

Yet, in addition to the stereotypes and schemas individuals hold for men and women, there are also certain implicit schemas for leaders. According to implicit leadership theory, most people have some sort of prototype of what it means to be a leader based on their past experiences and cultural background and use this prototype to quickly classify other group members as either leaders or non-leaders (Forsyth & Nye, 2008; Lord, De Vader, & Alliger, 1984; Calder, 1977). Followers' implicit theories of leadership, including their projected prototypes of leader behavior, hold a set of organized expectations to be exemplified by leaders such as dynamicism, conscientiousness, and superior intellect and social influence skills (Forsyth & Nye, 2008). Ultimately if these expectations are met, the leader may gain greater influence by personifying followers' unarticulated criteria or implied ideals for leadership characteristics and actions. However, leaders who do not match followers' leadership prototypes are significantly less likely to be accepted as the leader regardless of the level of their qualifications (Calder, 1977; Eden & Leviathan, 1975; Offerman et al., 1994; Rush, Thomas, & Lord, 1977).

This idea can be further explained through Berger, Rosenholtz, and Zelditch's expectation states theory (1980) which states that individuals in groups use schemas to assess the appropriate status of other group members on the basis of the social categories to which they believe the other belongs. Based on our cultural norms and our personal experiences with leadership our gender and leadership schemas lead us to expect men to

better leaders than women. These expectations then cause us to behave negatively towards women in leadership roles and evaluate them negatively even when they perform well (Butler & Geis, 1990). Next, these negative evaluations and behaviors reinforce our pre-existing belief in the superiority of male leaders and continue to make it less likely for women to emerge or be accepted as leaders not only in small group leadership settings, but also for men and women in the workplace (Foldy, 2006).

Eagly and Karau (2002) argue in their role congruity theory that it is these expectations, experiences, and stereotypes which lead to a basic cognitive incongruity between female gender roles and leader roles. Eagly argues that it is this incongruity between women's gender roles and the leadership prototypes set up through implicit theories of leadership, which ultimately explains the lack of women in leadership positions today (Eagly & Karau, 2002; Nye & Forsyth, 1991). This incongruity between expected gender-role behavior and the definition of the leadership role leads to gender bias and decreased recognition of women's leadership capabilities, particularly when individuals are asked to complete a very cognitively challenging task such as counting backwards (Martell, 1991, 1996). In particular, research suggests that it is more difficult to encode agentic and leadership behaviors when they are performed by women than by men and easier to encode communal behaviors for women (Scott & Brown, 2006; Sczesny, Spreeman, & Stahlberg, 2006). This leads to a distinct processing advantage towards men in leadership positions based on gendered leadership prototypes.

In particular, this experiment seeks to expand upon the prior applied research within hiring domains in order to better understand the way in which implicit biases operate against women in leadership, and how these impressions of leadership ability

change with the addition of gendered information. Past research on impression formation and person perception has shown that people have a tendency seek out information which matches their preconceived stereotypes rather than fully exploring and acknowledging information which may be counter to their preconceived notions (Johnston & Macrae, 1994). Therefore, this study examines how this informational bias plays out when participants receive gender information after an initial impression has already been formed. Changes in impression formation are a topic which has not yet been fully explored within the context of gender stereotypes and hiring, and although some studies have found evidence that stereotypes can change following disconfirming evidence, much of this change seems to be limited to explicit rather than implicit attitudes (Rydell, McConnell, Strain, Claypool, & Hugenberg, 2007). By asking participants to engage in a job-candidate selection search for a leadership position and measuring changes in participants implicit reactions to gender, this study aims to support Eagly and Karau’s (2002) role-congruity theory by showing that associations from an applicants’ gender role can interfere with a participant’s ability to recognize them as a leader.

This interference will be illustrated through a simulated leadership evaluation task in which the participant will be asked to read a resume of a potential applicant with no gender specified, form an impression of said candidate and evaluate them based on a leadership trait questionnaire. Participants will then be asked read a letter of reference which reveals the applicant’s gender and subsequently record their new impressions of the candidate based on an identical leadership trait questionnaire. It is hypothesized that once gender is made salient through a letter of reference men will be evaluated more favorably than women as leaders, as measured by greater difference scores between the

initial and post trait questionnaires in terms of their agentic and overall leadership trait scores than females.

Method

Participants

Participants were recruited to participate in an approximately 45-minute study on leadership via an online campus announcement system at the University of Richmond in exchange for ten dollars cash. A total of 20 female and 20 male undergraduate and community members participated in the study, ranging in age from 18 to 31 years old ($M = 20.38$ years). Of the participants 25 identified themselves as Caucasian, ten as African-American, three as Asian-American, and two as some other ethnicity.

Materials

Participants completed the experiment on one of three IBM ThinkPad laptop computers that were each located in their own testing room. The experiment was programmed on the laptops using the Superlab 4.0 software package to display task instructions and impression formation trait questionnaires. Resumes and letters of reference were printed on paper with each resume or letter being approximately one page in length. Participants were also asked to sign a consent form before the beginning of the experiment and a payment acknowledgement and nondisclosure form at the experiment's conclusion.

Each resume used was presented in such a way as to appear gender-neutral. Gender was eliminated on the resume through the deletion of gendered pronouns and through the use of an identification number at the top of the resume instead of a name. The resumes were equal in length (1 page long) and across conditions participants viewed

the identical set of resumes, but the assignment of resumes to gender of applicant were counterbalanced across participants. The format of each resume was the same with identical headings (Education, Work Experience, etc.) and resumes were designed to present sufficient information to allow participants to view the applicant relatively positively.

Stimulus resumes were developed by examining a pool of actual resumes submitted to the Career Development Center for peer review, with the names removed in order to ensure the privacy of their original creators. All the hypothetical applicants had slightly different but equally relevant past experiences with leadership and all were listed as having received multiple (unique) accolades for their academic achievement. Yet, each resume was unique in its description of the applicants various technological, communication, and interpersonal skills in order to realistically represent the information compiled from the resumes and to allow for some variation in the quality of applicants. In this way the resumes were designed to prevent participants from disqualifying applicants due to a lack of information.

Recommendation forms were also developed using a similar methodology by going over a pool of anonymous reference letters submitted from the university Career Development Center and from faculty members who were willing to share letters which they had written with the names excluded. The recommendation format was used to avoid presenting overcomplicated information and to ensure that the recommendation presented the exact same factual information as was contained in the resume. Each recommendation form was exactly one page long and was presented in an identical format with the student id number at the top, and responses to the following questions: How long have you

known this candidate and in what capacity? What can you tell me about this candidate’s accomplishments, personality and skills? Why do you feel this candidate would make a good addition to our company in this leadership position? Of all the students you have encountered in your career, would you rate this student in the top 1%, 5%, 10%, 20%, or 25% of students?

The primary difference between the various recommendations was the use of a gendered pronoun in the body of the letter which was designed to implicitly activate associations with the gender of the applicant. Half of the candidates were described as male and half as female for each participant and across participant conditions the gender of the pronouns was switched in each individual resume. Recommendation forms were counterbalanced across male/female applicant conditions (by substituting appropriate gender pronouns), as were the resumes.

Measures

Two identical primarily traits-based questionnaires were also used, once after the presentation of the resume and once after the presentation of the letter of reference. Items were based upon stimuli used in Scott and Brown’s (2006) study of the encoding of leadership behaviors following a gender-activation task. Questionnaires consisted of 18 trait-based statements such as “I feel this candidate is determined,” with which each participant had the opportunity to agree or disagree using a likert scale of 1-7 with one being disagree strongly and 7 being agree strongly. Within the 18 trait descriptions used there were three subscales (with six items each) measuring primarily agentic leadership traits (eg- independent), primarily communal leadership traits (eg- a teamplayer), and general feelings of leadership competency & job fit (eg- a good fit for our organization).

Pilot Testing

Before beginning the full experiment a pilot study was performed to test that the resumes were in fact gender neutral and to test the reliability of the individual items on the agentic, communal, and overall leadership scales. Pilot studies took approximately 30 minutes to complete and 19 participants were each paid \$5 for their time. Participants were presented with the hypothetical resume stimuli and then asked them to rate the resumes utilizing the 18-item trait-based questionnaire. Individual items for each of the three scales had high reliability (agentic: cronbach's alpha = .87, communal: $\alpha = .87$, overall leadership: $\alpha = .94$). At the conclusion of this initial pilot study participants were asked to share if they had perceived certain resumes as belonging to members of a particular gender in order to control for activities or qualifications which may inherently activate gender and qualitative data was recorded. Analyses revealed that while most of the resumes were perceived as gender neutral, many participants guessed that resume #6 was male and resume #2 was female. Bonferroni pairwise comparisons were also completed to determine any differences between the resumes in agentic, communal, or leadership ratings. General findings indicated that Resume #1 was typically perceived as being high in agentic traits, Resume #2 & #3 were high in communal traits, Resume #4 was high in overall leadership ability, and Resume #6 was perceived as being significantly lower in agentic, communal, and overall leadership traits than the other resumes.

Full-Experiment Procedure

Participants were asked to sign an initial consent form which informed that the purpose of the experiment was to understand how various sources of information impact

our ability to accurately categorize and recognize individuals as leaders in an applied hiring task. In the first part of the experiment the participants were presented with a set of basic instructions on the computer informing them that they would be evaluating a series of potential candidates for a very important leadership position in their hypothetical organization Amidex Incorporated. Next, participants were given five minutes to briefly look over the binder containing paper copies of the resumes of each of the six candidates and to familiarize themselves with the questionnaire which they would be using to evaluate each candidate.

Next, participants were instructed to rate each resume individually in order and to refrain from examining any of the other resumes while they rate each gender-neutral resume individually, taking as long as the participant wished. When they were done inspecting the resume participants were able to click the next button and were asked to complete a questionnaire regarding their impressions of the potential candidate. As the participant completed the questionnaire they had the option of referring to their paper copy of the resume as they recorded their answers on the computer and to make notes on a piece of scrap paper. However, as soon as they submitted the questionnaire, participants were instructed to flip to the next resume in the binder and to refrain from looking back at any past candidates.

After completing and submitting the first set of questionnaires evaluating the resumes, the participant was then presented with a second binder and informed that they were now receiving some additional information on each of the candidates which might alter their original perceptions. This binder included both the original resume and a recommendation form including information regarding the gender of the applicant.

Again, participants were instructed to evaluate each candidate individually and to complete an identical questionnaire now taking into account the new information about the applicant that they had just received. This second questionnaire contained identical items to the initial questionnaire and was designed to measure differences in impressions which may have occurred after gender was made salient.

This process of viewing a resume, completing a questionnaire, viewing a letter of reference, and then completing a second questionnaire was completed for a total of six potential applicants per participant. Half of the applicants were revealed to be women and half men in the letters of reference. Order of presentation and assignment of letters and resumes was counterbalanced across participants. At the completion of the experiment participants were shown a debriefing screen that informed them of the experiment’s true purpose in investigating the implicit gender biases in hiring and leadership selection. Participants were also paid \$10 for their participation and were asked to sign a payment acknowledgement and nondisclosure form in which they consented to not discuss the contents of the study with anyone else.

Finally, in order to maintain confidentiality and protect participants, the signed informed consent documents were kept in a locked filing cabinet and were kept separate from the data. Confidentiality was maintained by placing only a code number, and no personally identifying information, in all resulting data files. While the experimenters did track who participated in the experiment this information was confidential, and the experimenters were not be able to tell which participant produced which data file. There was no way to identify which data file is associated with which participant.

Results

From the initial 18 trait-based description items three average scores were calculated representing the average rating for each of the three subscales (agentic $\alpha = .83$, communal $\alpha = .88$, overall leadership $\alpha = .83$) and to produce an average agentic, communal, and general leadership score for each of the two identical questionnaires. Additionally, for each participant a difference score was calculated by subtracting the mean agentic, communal, or general trait questionnaire one score from the mean questionnaire two score and this difference score was used to compare the change in participants' ratings of the applicant across conditions.

Within-Subjects Analyses Three one-way within subjects (or repeated measures) ANCOVAs controlling for resume order of presentation were conducted to compare the effect of gender on the average difference in agentic, communal, and overall leadership ratings and to evaluate the hypothesis that leadership applicants who were revealed to be male would have a greater improvement in agentic and overall leadership ratings after gender was revealed. There was no significant effect of participant sex on the data, so the information was analyzed without controlling for this factor. There was, however, a significant main effect of applicant gender on agentic ratings, $F(1,38) = 6.78$, $p = .01$, $\eta^2 = .15$ with male applicants having a greater improvement in agentic ratings ($M = 0.44$, $SD = 0.46$) than women ($M = 0.32$, $SD = 0.34$). There was not a significant effect of applicant gender on differences in communal ratings or overall leadership ratings. However, it is important to note that there was a marginal effect of applicant gender on overall leadership ratings, $F(1,38) = 3.00$, $p = .09$, $\eta^2 = .07$ with male applicants having a greater improvement in overall leadership ratings ($M = 0.43$, $SD = 0.54$) than women ($M = 0.30$, $SD = 0.41$). These results suggest that on average when participant discovered

that the candidate was a man they rated him higher on agentic and leadership traits than when they discovered the candidate was a woman.

Between-subjects Analyses It was hypothesized that on average participants who discovered that the resume they were evaluating was male would have a greater increase in their agentic and overall leadership ratings of the candidate than participants who were evaluating this identical resume and discovered that it was female. One-way between subjects ANCOVAs controlling for order were conducted (one on each resume-- since half of the participants would see a particular resume as male and the other half would see it as female) to compare the effect of gender on the average difference in agentic, communal, and overall leadership ratings for each of the six resumes. There were no significant main effects of gender on agentic or overall leadership ratings for resume #1, but there was a significant main effect of gender on communal ratings for resume #1, $F(1,38) = 5.11, p = .03, \eta^2 = .12$ with women having a greater increases in communal ratings ($M = 0.47, SD = 0.58$) than men ($M = 0.04, SD = 0.61$). For resumes #2 and #3 there were no significant main effects of gender on agentic, communal, or overall leadership ratings. For resume #4 there were no significant main effects of gender on agentic, communal, or overall leadership ratings, but there was a marginally significant effect of gender on overall leadership ratings, $F(1,38) = 3.01, p = .09, \eta^2 = .07$ with men having a greater improvement in overall leadership ratings ($M = 0.60, SD = 0.83$) than women ($M = 0.23, SD = 0.70$). For resume #5 there were no significant main effects of gender on agentic, communal, or overall leadership ratings, but there was a marginally significant effect of gender on overall leadership ratings, $F(1,38) = 3.71, p = .06, \eta^2 = .09$ with women having a greater improvement in overall leadership ratings ($M = 0.34, SD =$

0.85) than men ($M = -.15$, $SD = 0.83$). Finally, for resume #6 there were no significant main effects of gender on agentic, communal, or overall leadership ratings.

Discussion

The hypothesis that once gender was made salient through a letter of reference men would be evaluated more favorably than women as leaders, as measured by greater difference scores between the initial and post trait questionnaires in terms of their agentic and overall leadership trait scores than females, was supported in this study. In particular, the overall within-subjects effect showed that when participants discovered that an applicant was a male they were more likely to increase their ratings of that candidate as being agentic and as a well qualified leader overall. Furthermore, between-subjects gendered effects were also found for resume #1 in which women were rated as more communal than men (which we did not originally predict as being not agentic is not the same thing as being communal), and resume #4 in which men were rated as having higher overall leadership ability. These findings suggest that while explicit discrimination against women may be on the decline, gender still has a significant effect on our implicit perceptions of leadership ability within hiring contexts.

Findings in Relation to Past Research These findings lend further support to Eagly and Karau’s (2002) role incongruity theory that women are evaluated less favorably than men as leaders as a result of a basic cognitive incongruity between feminine and leadership roles. This also supports Berger, Rosenholtz, and Zelditch’s expectation states theory (1980) and the idea that individuals use schemas to assess the appropriate status of other group members on the basis of the social categories to which they believe the other belongs and that these schemas also exist in relation to gender and

leadership (Foldy, 2006; Schlein, 1973; Heilman, Martell, & Simon, 1988; Lord, De Vader, & Alliger).

However, while there does seem to be a strong significant main effect of gender on agentic and leadership ratings within participants, these effects were not as universally strong as originally predicted across participants. In particular for resumes #2, 3, and 6 there were no significant differences in agentic, communal, or overall leadership ratings after gender was revealed, and for Resume #5 participants actually rated the candidate more favorably overall as a leader after discovering the candidate was a woman. While these findings may initially be surprising and seem contradictory, they can be better understood within the framework of Biernat and Manis' (1994) and Kobrynowicz and Biernat's (1997) work on shifting standards in relation to widespread stereotypes. Both studies found that while objective assessments of bias towards stereotyped groups seem to accurately reveal bias and discrimination, more subjective assessments often fail to measure existing mental biases. This phenomenon seems to occur when participants evaluate stereotyped individuals against their existing stereotypical expectations rather than comparing them to their non-stereotyped peers. For example, a subjective item that asks a participant to identify if a potential job candidate is “a good leader” may mean a different thing when the participant is evaluating the candidate as a man versus as a woman, thus masking the actual biases which may exist. Therefore, it may be that to say that a woman is a good leader subjectively is, in essence, to say that she is a good leader (“for a woman”) rather than to say that she is a better leader than a man or a good leader across both men and women. Thus, this data seems to suggest that even in cases when overt gender biases seem to be declining, shifting standards may actually be operating as

a more subtle prejudice that suggests that people from different genders can and should be evaluated against a different set of standards (Biernat & Manis, 1994).

Limitations While this study did find the predicted effects and general trends in regards to women and leadership, many of the means were only marginally significant and can not conclusively support the continuation of implicit gender biases in hiring. Furthermore, because this study dealt primarily with a population of highly educated undergraduate students predominantly from white, upper-class backgrounds, it is difficult to determine the full applicability of these findings to the real-world. While we can infer that everyone suffers from implicit biases to some extent, it is difficult, if not next to impossible for us to determine the extent to which these biases are operating in the lives of real human resources personnel, etc.

Future Research In the future it might be helpful to investigate the effect of candidate qualification level on the use of stereotypical judgments of candidates. In particular, based on some of the preliminary data of this study, one might predict that in cases of more highly qualified individuals participants may be less likely to openly discriminate against the candidate and may actually overestimate the capabilities of the stereotyped candidate in order to avoid appearing biased. However, we might also predict that for candidates with more ambiguous qualifications participants may need to rely more extensively on stereotypical judgments for information and may thus more negatively evaluate female leadership candidates.

Another interesting area of future research involves the addition of a cognitive load to the existing study. Past research has suggested that a potential cause of gender discrimination is the increased difficulty associated with encoding information about

women as leaders (Martell, 1991, 1996; Scott & Brown, 2006; Sczesny, Spreeman, & Stahlberg, 2006). This difficulty is particularly accentuated in the presence of cognitive load (for example, being asked to remember an eight digit number) which depletes participants' cognitive resources and causes participants to rely more heavily on stereotypical information (Wigboldus, Sherman, Franzese, & van Knippenberg, 2004; Gilbert & Hixon, 1991; Sherman & Frost, 2000; Sherman et al., 1998). With this in mind, future research should explore how the bias towards women leaders found in this experiment would be affected if participants were asked to complete their evaluations under a situation of cognitive load.

Real-World Applications For individuals outside of the scientific and psychological community this research is extremely significant as it is one of first studies to look at implicit rather than explicit biases in hiring. In particular, these findings suggest that people actually alter their opinions of individuals after receiving even the most subtle cues as to their gender, and can actually our ability to recognize an individual's capabilities as leader. On very a fundamental level this research relates to social justice issues and lends understanding into the way in which subconscious biases operate against all minority or disadvantaged groups. While these findings do suggest that biases against women exist, they are certainly not irrefutable proof that these biases can or will continue, and by identifying and acknowledging these biases in the workplace it is possible for us to minimize their effects. We can begin with education and exposure and perhaps someday the schemas which currently govern our subconscious minds can be altered to create a more equalitarian world tomorrow.

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