HUMILITY AND LEADERSHIP POTENTIAL:
TESTING A MODERATED MODERATED MEDIATION MODEL

by

CHRISTA B. MASON

DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy at
The University of Texas at Arlington
December, 2020

Arlington, Texas

Supervising Committee:

Nicolette P. Hass, Supervising Professor
Jared B. Kenworthy
Angela Liegey-Dougall
Ronald E. Riggio
Amber N. Schroeder

ABSTRACT

HUMILITY AND LEADERSHIP POTENTIAL:

TESTING A MODERATED MODERATED MEDIATION MODEL

Christa B. Mason, Ph.D.

The University of Texas at Arlington, 2020

Supervising Professor: Nicolette P. Hass

Despite the growing research on humble leadership, views on humility remain mixed and little is known about how humble individuals become leaders. To address this gap, this study examined how expressed humility was related to perceptions of an aspiring leader's warmth, competence, and leadership potential. It tested a moderated moderated mediation model to assess: (1) if perceived warmth and competence explained the relationship between humility and leadership potential, and (2) if this relationship varied based on an aspiring leader's perceived dominance and gender. Professionals with hiring experience ($N = 187$) evaluated male and female leadership candidates who demonstrated different combinations of humble and dominant behaviors. Results indicated no support for moderated moderated mediation relationships. However, exploratory analyses revealed a positive indirect relationship (via perceived warmth) and a positive direct relationship between expressed humility and leadership potential, which were contingent on dominance. When perceived as moderately or highly dominant, aspiring leaders received the most benefit from humility. In these conditions, humbler individuals were seen as having greater leadership potential both directly and indirectly through stronger warmth

perceptions. Thus, this study provides a more nuanced understanding of the relationship between

humility and leadership potential, along with empirical support for the paradoxical advice of

blending humility with agency. Implications for leadership theories, aspiring leaders, and

organizations are discussed.

ACKNOWLEDGMENTS

DEDICATION

This work is dedicated to those who have supported and believed in me during my academic pursuits and beyond, beginning with my parents. Since I was young, you have fostered a deep love of learning within me and have been a model for love, faith, and hard work. You have been and continue to be my rock, inspiring me to push through all challenges—including graduate school—and to be the best version of myself each day. I could not have asked for better parents, and I love you both very much. In addition to my parents, I would also like to thank my brother, Cade, and his wife, Alyssa, for their love and encouragement. Cade, as my big brother, you have always been a role model, teacher, and friend. Your own accomplishments have motivated me to aim high, and I am so proud to be your sister. I am also thankful for my "hermanas," Ale, Danielle, Kelsey, and Reagan. You are the best cheerleaders and friends, and our friendship has been the greatest gift to come out of graduate school. Moreover, I am also grateful for my Leadership Worth Following team members, past and present, who are too numerous to list here. My time at LWF has changed my life, and you all inspire me to continually do better and be better. I greatly appreciate everyone's support during graduate school, and I want to especially thank Kaylynn, who went above and beyond as a co-worker and roommate during the final stretch of my dissertation. Finally, I want to thank God for His faithfulness and the strength and grace to complete this work. I am forever grateful.

"It always seems impossible until it's done." —Nelson Mandela

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

Within Western cultures, views on humble leadership have grown more favorable in recent years. Humble leaders—defined as leaders who are willing to see themselves accurately, appreciate others' strengths and contributions, and are teachable—have been praised in the press (e.g., Shellenbarger, 2018), and their positive effects on followers and organizations have been supported in research (for a review, see Nielsen & Marrone, 2018). Yet, despite its benefits, perspectives on humility and leadership remain mixed. At best, humility is seen as a helpful supplement to traditional leadership characteristics. At worst, it is viewed as a limitation to effective leadership, especially when leaders lack (or are perceived as lacking) power and competence (Owens & Hekman, 2012; Wang, Owens, et al., 2018; Zapata & Hayes-Jones, 2019). Under these conditions, humility can backfire, causing leaders to be seen as weak, timid, and unsuited for leadership. Therefore, to achieve optimal effectiveness, scholars have advised leaders to demonstrate a paradoxical blend of humility and agency (e.g., assertiveness, confidence, and ambition; Owens et al., 2013; Wang, Owens, et al., 2018; Zhang et al., 2015).

However, it is unclear whether this paradoxical advice is exclusive to individuals in leadership roles or if it also applies to those seeking leadership positions. Thus far, only one study has examined how humility affects perceptions of aspiring leaders' leadership potential, finding that expressed humility was a positive predictor for both men and women in the United States Army (Swain & Korenman, 2018). Yet, generalizability for this study is limited due to its unique population. In contrast to the U.S. Army, within non-military organizations, humility has often been seen as a feminine characteristic that is atypical of leadership (Offerman & Coats, 2018; Rudman, Moss-Racusin, Phelan, & Nauts, 2012). Therefore, when studied outside of the

military, humility may have a null or negative relationship with leadership potential unless accompanied by agentic behaviors. Moreover, due to gender stereotypes that pervade the leadership domain, outcomes for men and women could also differ. Although a particular combination of humble and agentic behaviors may be advantageous for one gender, it may be detrimental for the other.

The current study addresses these gaps in humble leadership research by investigating the relationship between expressed humility and leadership potential in a non-military, professional population. It makes an additional contribution to the literature by examining the direct and indirect associations between humility and leadership potential, which have not been empirically researched. Drawing from the "Big Two" framework of social perception, role congruity theory, and backlash theory, it tests a novel model of mediators (i.e., perceived warmth and competence) and moderators (i.e., agentic dominance and target gender) influencing this relationship.

Expressed Humility

Humility is a complex construct that lacks a singular definition. Although scholars tend to disagree on its specific components, most agree that humility represents "the willingness to see the self accurately, including both strengths and limitations" (Peterson & Seligman, 2003, p. 463). In psychological and organizational research, it has been commonly described as a virtue or character strength that promotes individual and social well-being (Hill & Sandage, 2016). Yet, both inside and outside of academia, views on humility have often differed. Instead of seeing it as a strength, some non-academics have associated humility with humiliation, shame, and an inferior self-view (Exline & Geyer, 2004; Weidman et al., 2016). Moreover, humility has been frequently conflated with modesty given their conceptual overlap. Although some scholars have used the terms interchangeably (e.g., Davis et al., 2016), others have maintained that the two are

distinct constructs. As explained by Kruse et al. (2017), humility is internally (cognitively) driven. It is rooted in a secure, balanced view of strengths and weakness, such that humble individuals do not think too much or too little of themselves. Modesty, by contrast, is largely externally (behaviorally) driven and is focused on self-presentation, not self-assessment. Modest individuals deflect attention, undersell their abilities, and avoid appearing superior to others, regardless of how they view themselves.

Despite being internally focused, humility has several distinct behavioral manifestations. Owens et al. (2013) were among the first to empirically study the interpersonal facets of humility, which they termed *expressed humility*. This form of humility has three components: a willingness to see the self accurately, appreciation of others' strengths and contributions, and teachability. Behaviorally, these are demonstrated by admitting weaknesses, limitations, mistakes, and failures; recognizing and drawing attention to the value others bring; and asking for help, seeking feedback, and learning from others. Within empirical research on humble leadership, Owens et al.'s measure of expressed humility has been predominantly used (McElroy-Heltzel et al., 2019). Thus, in the leadership literature, humility has largely come to represent being self-aware, open-minded, other-focused, and growth-oriented. Additionally, it is associated with stronger team effectiveness (Owens & Hekman, 2016) and overall firm performance (Ou et al., 2018), as well as followers' increased engagement, satisfaction, retention (Owens et al., 2013), creativity (Wang, Liu, & Zhu, 2018), and task performance (Wang, Owens, et al., 2018).

Expressed Humility and Leadership Potential

As research on humble leadership has grown over the last decade, still little is known about how humble employees are perceived or how they become leaders. Given the benefits of

humble leadership (Nielsen & Marrone, 2018), increasing the number of humble leaders within organizations seems desirable. Because humility is a "modifiable trait" (Owens et al., 2015), it is possible to accomplish this through leadership development activities. Yet, an alternative, more efficient approach would be to select and promote humble individuals into leadership positions more often. Therefore, it is important to understand how expressed humility influences leadership perception and selection processes within organizations.

Although several factors affect who fills a leadership role, being seen as "leader-like" is an important component (Forsyth & Nye, 2008; Hogan et al., 1994). According to leadership categorization theory, when evaluating others' potential and effectiveness as organizational leaders, individuals rely on their leadership prototypes (Lord et al., 1984). These prototypes are cognitive frameworks consisting of the qualities and attributes deemed most characteristic of leadership, which help distinguish leaders from non-leaders. Following the prototype-matching hypothesis, when there is a match between the leadership prototype and an employee's traits and behaviors, he or she is seen as having leadership potential (Lord & Maher, 1991).

The Mediating Role of Warmth and Competence

In addition to specific prototypes, like sensitivity, dedication, and intelligence (for a review, see Lord et al., 2020), leadership research has also used broader dimensions of social perceptions to explain leadership perceptions (Lord et al., 2017; Zapata & Hayes-Jones, 2019). These dimensions, known as the "Big Two," are at the core of social judgments and are used at both the individual and group levels to form impressions of others (Abele et al., 2016; Fiske, 2018). When describing the Big Two, contemporary frameworks generally label the first dimension as either warmth (e.g., Fiske et al., 2002), communion (e.g., Abele et al., 2016), or morality (e.g., Wojciszke, 2005) and the second dimension as competence (e.g., Fiske et al.,

2002; Wojciszke, 2005) or agency (e.g., Abele et al., 2016). Despite these differences in labels, the dimensions' content tends to be conceptually similar across studies. In particular, the warmth-communion-morality dimension is a blend of sociable and ethical attributes tied to forming social relationships and cooperation. The competence-agency dimension, on the other hand, is typically a mixture of capability and assertiveness related to attaining personal goals.

To explain the relationship between humility, dominance, gender, and leadership potential in the present study, the Big Two were narrowed down to warmth and competence only. This is because warmth—operationalized as being warm, likeable, trustworthy, good-natured, and sincere—has greater relevance to the constructs of interest than aspects of communion (e.g., affectionate) and morality (e.g., righteous) do. Additionally, competence—operationalized as being competent, capable, efficient, skillful, and intelligent—is a narrower construct than agency and shares less conceptual overlap with dominance. This was important so that the study's moderating and mediating variables were not redundant.

Warmth, Competence, and Leadership Potential

In the literature, both warmth and competence have been seen as key components of leadership (Cuddy et al., 2011; Lee & Fiske, 2008; Lord et al., 2017). They parallel the relationship and task facets of the construct, which have been recurring themes since Bales' (1950) initial work on socioemotional (warm) and instrumental (competent) leadership. Yet, between the two traits, competence has often been more influential for leadership and organizational decision-making, such as who to hire, promote, and follow. This is because competence has a clearer connection to job and leadership performance (Cuddy et al., 2011). It indicates that an individual will be effective at completing tasks and achieving goals, thus contributing to personal and organizational success. Additionally, higher competence has also

been associated with having greater influence within groups (e.g., Anderson & Kilduff, 2009) and was reflected among the leadership prototypes (i.e., intelligence and creativity) identified by Offerman and Coats (2018). Given the complexity of responsibilities, individuals expect current and potential leaders to be competent, and perceived intellectual competence was found to be an even stronger predictor of leadership than objective intelligence (Judge et al., 2004).

Although competence remains more central to leadership perceptions, warmth also affects how potential leaders are viewed. In recent decades, leadership styles and stereotypes have evolved to incorporate "more feminine relational qualities, such as sensitivity, warmth, and understanding" (Koenig et al., 2011, p. 634). This reflects the growing representation of women in leadership, along with the increasing importance of collaboration, shared leadership, and "soft skills" in today's workplace (Offerman & Foley, 2020). By helping leaders connect and foster cooperative relationships, warmth has largely been viewed as an asset (Cuddy et al., 2011). Additionally, it is expected of leaders, and along with other sensitivity-related qualities, accounted for the most variance in prototypical leadership characteristics (Offerman & Coats, 2018). Thus, appearing caring, friendly, and likeable should positively influence perceptions of leadership potential and effectiveness.

Yet, research by Vial and Napier (2018) points to an important stipulation, which further underscores the primacy of competence in leadership evaluations. Unlike most studies on leadership perceptions, Vial and Napier included constraints to distinguish between the essential and supplemental characteristics looked for in leaders. They found that, when choices were not constrained, individuals had a stronger preference for warm, communal leadership, which aligns with Offerman and Coat's (2018) findings. However, when choices were constrained, warmth was still valued in leaders, but it became secondary to competence and assertiveness. Thus, they

concluded that although both were prototypical, warmth was a supplemental, "nice to have" leadership characteristic, whereas competence was more requisite.

Humility's Effect on Warmth and Competence

The preeminence of competence over warmth in leadership perceptions could put aspiring humble leaders at a disadvantage. By openly admitting limitations and knowledge gaps, humble individuals may come across as less competent and capable than their peers. Likewise, due to their willingness to seek and accept guidance and to share credit with others, humble employees could be seen as less autonomous and skilled. Moreover, in many ways, humble behaviors resemble help-seeking behaviors and could generate social costs similar to those that accompany help-seeking. These include being judged as incompetent, inferior, and dependent on others (e.g., Lee, 2002). In support of this, when leaders expressed humility in academic and business settings, observers rated them as having less agentic characteristics, particularly competence, assertiveness, and independence (Zapata & Hayes-Jones, 2019). This in turn had a negative impact on their perceived leadership effectiveness. Additionally, in their qualitative research, Owens and Hekman (2012) found that humility raised doubts about individuals' competence, especially when other presumed signals of expertise and ability were lacking (e.g., title, status, tenure). Although these studies, like most on expressed humility, were conducted with leadership samples, similar results should be seen with non-leaders.

In contrast to competence, perceptions of warmth likely increase with greater humility. By being open-minded, complimentary of others' strengths, and appreciative of colleagues' contributions, humble employees likely come across as kind and good-natured. Additionally, through their self-disclosures of mistakes and failures, humble individuals should be seen as more trustworthy and likeable (Collins & Miller, 1994). Although there is a lack of studies on

humility and warmth, research has supported that humble behaviors do promote greater trust (Owens & Hekman, 2012) and that expressed humility is associated with greater likeability (Swain, 2018). Additionally, when business leaders demonstrated humility, they were seen as having more communal characteristics, which included warmth, helpfulness, and honesty. Due to their prototypicality, these communal characteristics were also linked to stronger perceptions of leader effectiveness (Zapata & Hayes-Jones, 2019).

Taking these findings together, it was expected that humility would have contrasting effects on perceived competence (negative) and warmth (positive). Because both competence and warmth help individuals be seen as leader-like, these contrasting effects should result in a nonsignificant relationship between humility and leadership potential. A similar effect was seen in Zapata and Hayes-Jones' (2019) studies on humble leadership. In their work, they found that humility had a null effect on leadership effectiveness due to mutual suppression. By increasing perceptions of communal characteristics (i.e., warm, helpful, honest) and decreasing perceptions of agentic characteristics (i.e., competent, assertive, independent), humility acted as a "double-edged sword" for effectiveness. It helped leaders by making them appear more relational and other-oriented but harmed them by making them seem less confident and skilled. The current study aimed to extend Zapata and Hayes-Jones' findings and test if comparable effects occur with leadership potential. It also builds upon their work by including agentic dominance and target gender as moderators.

The Moderating Role of Agentic Dominance and Target Gender

As explained above, humility can have mixed effects on leadership perceptions. Therefore, to mitigate possible disadvantages, scholars have advised leaders to balance their humility with demonstrations of agency (Owens et al., 2013; Wang, Owens, et al., 2018; Zhang

et al., 2015). Unlike humility, agency is a construct aimed at advancing the self and "getting ahead" (Abele et al., 2016; Carrier et al., 2014). In the gender leadership literature, it has been further divided into two distinct forms: agentic dominance and agentic competence (Rosette et al., 2016; Rudman & Glick, 2001). Agentic competence is synonymous with how competence is defined in this study (i.e., possessing the skills and capabilities to achieve goals), whereas agentic dominance (henceforth call dominance for brevity) is defined as the "pursuit of control and advancement over others" (Rosette et al., 2016, p. 4). It is represented by dominant and controlling characteristics, including assertiveness, ambition, self-confidence, forcefulness, and directness (Carrier et al., 2014; Rosette et al., 2016; Rudman & Glick, 2001).

Dominance

Although dominance can be destructive when overdone, when kept in check, it confers distinct advantages for potential leaders. Previous studies have supported that dominance is a relatively strong predictor of leadership potential, emergence, and effectiveness (Judge et al., 2002; Lord et al., 1986), which is a trend that is also seen in recent works. For instance, in Offerman and Coats' (2018) research, several dominant qualities were rated as prototypical of leadership, supporting that individuals still expect leaders to be strong, commanding, and authoritative. Likewise, Vial and Napier (2018) discovered that assertiveness (i.e., ambitious, assertive, competitive, decisive, self-reliant), more so than communality, was associated with the "ideal leader" and was also seen as more important for leadership success.

In addition to helping individuals appear more leader-like, dominance also increases perceptions of competence. Anderson and Kilduff (2009) found that, in comparison to other group members, dominant individuals tended to speak first and provided more information relevant to problems, along with solutions. Although their solutions were not more likely to be

correct, group members perceived dominant individuals to be more competent and afforded them greater influence over the group's decisions. Additionally, in their meta-analysis, Williams and Tiendens (2016) reported that dominance was associated with greater perceived competence for both men and women.

Given the benefits of dominance, demonstrating a blend of humility and dominance may be advantageous for aspiring humble leaders. By acting as a signal of intelligence, efficacy, and status, dominance could buffer the negative effects of humility on competence, thereby enhancing leadership perceptions. Additionally, higher levels of humility should also protect dominant behaviors from being perceived as overly aggressive and overbearing. Similar results were seen in Owens et al.'s (2015) study on narcissism and humility. They found that humility appeared to temper the negative effects of narcissism, such as self-absorption and excessive confidence, and resulted in increased leadership effectiveness and follower outcomes.

Target Gender

Furthermore, it is also important to examine the interaction between humility and dominance through the lens of gender. Because despite a more egalitarian workplace, stereotypes persist that can create biased views about gender and leadership. According to role congruity theory, women in particular face a double bind when seeking leadership positions due to the beliefs about how women are (i.e., descriptive stereotypes) and how women should be (i.e., prescriptive stereotypes; Eagly & Karau, 2002). As reported by Eagly et al. (2019), women remain stereotyped as being communal, cooperative, and other-oriented, whereas men are stereotyped as being agentic, competitive, and self-focused. These descriptive stereotypes can put men at an advantage for leadership positions, which are still largely regarded as masculine and agentic (Koenig et al., 2011; Offerman & Coats, 2018). Essentially, it is easier for men to be

10

recognized as leader-like given their presumed traits, whereas women must demonstrate more agentic characteristics to overcome their agentic deficit and be seen as fit for leadership (Eagly & Karau, 2002; Rosette et al., 2016; Rudman, Moss-Racusin, Glick, & Phelan, 2012).

However, when women engage in agentic behaviors, they risk violating gender prescriptions. In their research on gender prescriptive stereotypes, Rudman, Moss-Racusin, Phelan, and Nauts (2012) found that not only were men and women seen as agentic and communal, respectively, they were also expected to behave as such. Moreover, it is also important to note for the present study that humility was *prescribed* for women but not men and that dominance and arrogance were *proscribed* for women. In other words, men were permitted to be controlling, aggressive, and egotistical, whereas women were expected to be humble and could be punished for dominant, arrogant demonstrations.

This proscription has given rise to what is known as the "agentic penalty" whereby women, but not men, experience backlash for dominant behaviors (Eagly & Karau, 2002; Rosette et al., 2016; Rudman, Moss-Racusin, & Glick, & Phelan, 2012). Several studies have supported the backlash effect, finding that women who engaged in dominant behaviors, such as showing anger, confidence, self-interest, and self-promotion, experienced both social and economic penalties (for reviews, see Rudman, Moss-Racusin, Glick, & Phelan, 2012; Rudman & Phelan, 2008). Most often, they were seen as equally competent but less socially skilled than men who demonstrated the same dominant behaviors. Likewise, they were rated as less hireable for leadership positions. Therefore, to avoid agentic penalties, gender scholars have advised women to temper or "soften" their agency with communal behaviors. This blending of agentic and communal behaviors, such as humility, has often resulted in more favorable leadership perceptions and outcomes for women (e.g., Rudman & Glick, 1999; Schock et al., 2019).

11

Therefore, in this study, it was expected that demonstrating both humility and dominance would positively impact women's leadership potential.

Further, although backlash has been studied predominantly in women, men can also experience repercussions for violating certain gender norms. In their study on modesty (i.e., lacking pretentiousness, not self-promoting), Moss-Rascusin et al. (2010) found that modest men incurred penalties that modest women avoided. Specifically, they were rated as less likeable due to their perceived weakness and lack of agency, which Moss-Rascusin et al. operationalized similarly to dominance. However, modest men and women were seen as equally competent, communal, and hireable. So, despite being disliked, these atypical, modest men did not face the hiring discrimination that atypical, dominant women generally experienced. By contrast, in another study, atypical men who advocated for benefits for their teams instead of for themselves suffered greater backlash (Bosak et al., 2018). Compared to their female counterparts, other-advocating men were seen as having an agentic deficit. That is, they were perceived as less dominant and competent. As a result, they were more likely to be passed over for promotions and recommended for termination than other-advocating women were. Based on these studies, it is plausible that, in comparison to passive norm violations (i.e., modesty), active norm violations (i.e., advocating for others) create stronger backlash effects for men. Thus, in this study, demonstrating humility while lacking dominance was expected to have a negative impact on men's leadership potential.

Overview and Hypotheses

Adding to humble leadership research, this study tested a moderated moderated mediation model of the relationship between expressed humility and perceived leadership potential. As previously mentioned, only one study has explored this relationship using a military

sample, finding that humility was a positive predictor for leadership potential (Swain & Korenman, 2018). However, given the research discussed above, results were expected to differ from Swain and Korenman's (2018) findings and support that humility is not universally advantageous for aspiring leaders. Further, this study also builds upon the scarce literature on humble leadership by using similar mediators and unique moderators (Zapata & Hayes-Jones, 2019). It provides a more nuanced understanding of the relationship between humility and leadership potential, examining if this association is dependent on aspiring leaders' dominance and gender.

Integrating existing theories and research, the study tested the following hypotheses:

Hypothesis One

It was expected that demonstrating dominant behaviors would function as a buffer against the agentic deficits (i.e., decreased competence) that humility can create and that women are stereotyped to have. Therefore, perceptions of competence should not differ between levels of humility when dominance is high. Moreover, these effects should be similar for both men and women, as backlash effects should not affect competence perceptions in this condition.

By contrast, humility's impact on perceived warmth was expected to vary by gender when dominance is high. According to role congruity and backlash theories, when women demonstrate dominance, they violate prescriptive and proscriptive stereotypes and experience agentic penalties (Rosette et al., 2016; Rudman, Moss-Racusin, Glick, & Phelan, 2012). These penalties tend to come in the form of social backlash, meaning that dominant women should be judged as less warm than their male counterparts. Moreover, although demonstrating humility should weaken this backlash and increase women's perceived warmth, research suggests that dominant men may receive an even stronger benefit for behaving humbly. Specifically, in their

qualitative study, Owens and Hekman (2012, p. 797) found that "when men show humility, they are less likely to be socially penalized and more likely to be admired" and "given more credit." This is because humility is expected in women, whereas it is rewarded for men, as long as their agency is not in question. Therefore, in conditions of high dominance, it was expected that demonstrating humble behaviors would have a positive effect on men's and women's perceived warmth, with men receiving a greater benefit.

Hypothesis 1. Dominance and target gender will moderate the positive relationship between expressed humility and perceived warmth, such that when dominance is high, the relationship is stronger for men.

Hypothesis Two

When dominance is low, humility was expected to have a negative impact on competence and a positive impact on warmth with results varying by gender. Following role congruity and backlash theories, when men demonstrate humility while lacking dominance, they violate prescriptive agentic stereotypes and likely appear weaker. Conversely, when women demonstrate these same behaviors, they uphold gender expectations. Therefore, although both genders should experience agentic deficits when dominance is low, humble men should also experience backlash. This means that men will experience less benefits (i.e., increased warmth) and greater costs (i.e., decreased competence) for expressing humility relative to women.

Hypothesis 2a. Dominance and target gender will moderate the negative relationship between expressed humility and perceived competence, such that when dominance is low, the relationship is stronger for men.

14

Hypothesis 2b. Dominance and target gender will moderate the positive relationship between expressed humility and perceived warmth, such that when dominance is low, the relationship is stronger for women.

Hypothesis Three

Because warmth and competence are both prototypical of leadership (Cuddy et al., 2011), they should have a positive relationship with leadership potential. Therefore, when dominance is high, it was expected that the "warmth bonus" that men experience from humility would result in a stronger relationship between humility and leadership potential for men. A similar result was seen in Swain and Korenman's (2018) experiment. They found that, although expressing humility was beneficial for both genders in the U.S. Army, humility gave men an additional boost in perceived leadership potential, which was not seen for humble women. On the other hand, when dominance is low, humility was expected to simultaneously increase warmth and decrease competence perceptions for both genders. Further, given the backlash effects that men should experience in this condition, they should receive less warmth benefits from humility and greater competence costs. Thus, humility should be less advantageous for male aspiring leaders than female aspiring leaders when dominance is low.

Hypothesis 3a. Perceived warmth will be positively related to leadership potential.

Hypothesis 3b. Perceived competence will be positively related to leadership potential.

Hypothesis 3c. There will be a positive indirect relationship between expressed humility and leadership potential through perceived warmth; this relationship will be stronger for men when dominance is high and stronger for women when dominance is low.

Hypothesis 3d. There will be a negative indirect relationship between expressed humility and leadership potential through perceived competence; this relationship will be stronger for men when dominance is low.

CHAPTER 2

METHOD

Design and Participants

The study employed a 2 (humility: low, high) × 2 (dominance: low, high) × 2 (target gender: man, woman) between-subjects experimental design. An a priori power analysis was conducted to estimate the sample size needed to detect significant effects in the regression component of the moderated moderated mediation model (Faul et al., 2009). Results indicated that a sample size of 395 would be adequate to detect small effects (Cohen's $f^2 = .02$) and that 160 participants would be adequate to detect small-to-moderate effects (Cohen's $f^2 = .05$). Given that the potential effect size was unknown, the conservative estimate of 395 participants was targeted for the study. Participants were recruited via Prolific Academic and were pre-screened to be employed (or job seeking), English-speaking adults who had experience hiring job candidates and working in the business administration and management sector. This pre-screening was selected to provide a professional sample that would likely be familiar with the study's leadership selection scenario. In total, 237 participants completed the study. The study took approximately 10 minutes to complete, and participants were compensated $1.75. After removing participants who did not fit the pre-screening criteria, responded carelessly, or had missing data, the study's final sample size was 187. A post-hoc power analysis indicated that this sample size had a power value of .49 to detect small effects in the regression component of the moderated moderated mediation model (Faul et al., 2009).

The sample was comprised of 67 (35.8%) men and 120 (64.2%) women. The racial/ethnic composition of participants was 89.3% White, 3.7% Black, 2.1% Hispanic/Latino, 3.2% Asian, and 1.6% Other. The majority of participants fell between the ages of 30 and 39

17

(36.4%) and 40 and 49 (21.9%). Most of the sample lived in either the United Kingdom (68.4%) or the United States (25.7%).

Procedure

The study was conducted via an online survey created in QuestionPro. After being piloted with university students, it was hosted on Prolific Academic. It was presented to potential participants as a research study on leadership feedback and selection. After providing consent, participants read information explaining the context and instructions for a fictitious leadership selection scenario in which they served as a "Human Resources Selection Analyst" for a large business corporation. As part of this scenario, they were asked to review assessment center feedback (i.e., interview and role-play performance feedback) for a recent leadership candidate and then provide their reactions and recommendations for the candidate.

After reading an overview of the scenario, participants were then randomly assigned to one of eight conditions based on the experimental design. Depending on their assigned condition, participants reviewed assessment center feedback that described a male or female leadership candidate demonstrating either high or low humility along with either high or low dominance. After reviewing the assessment center feedback, participants answered a gender manipulation check and two attention check items to ensure that they paid adequate attention to the assessment feedback material. Participants then rated the candidate's leadership potential and hireability. This was done to limit the influence of manipulation checks and mediator items on the dependent variable. Next, participants answered questions regarding the perceived warmth and competence of the leadership candidate, and items were randomized to reduce ordering effects. Participants then completed a manipulation check for humility and dominance to determine if the experimental manipulation was successful. Finally, the survey concluded with personality and

18

demographic items, along with an open-ended question about the study's purpose. After finishing the survey, participants were debriefed and compensated.

Materials

Experimental Manipulation

A fictitious leadership selection scenario was created to manipulate the variables of interest: humility, dominance, and target gender. As part of this scenario, participants assumed the role of a "Human Resources Selection Analyst" responsible for recruiting, assessing, and selecting job applicants for leadership positions. They were tasked with narrowing down the leadership applicant pool by reviewing assessment center feedback for a leadership candidate and providing recommendations for how to proceed with the candidate. In their instructions, only general criteria for the leadership position were provided (see Appendix A). This matched the abstract concept of leadership and also primed participants to use their preconceived ideas about leadership and gender, which was appropriate for the current study (Fiske & Taylor, 1991). Moreover, feedback from an assessment center, which uses multiple methods to assess leadership skills and behaviors, was chosen given the study's focus on expressions of humility and dominance. The assessment center feedback that participants reviewed included a transcribed excerpt of the candidate's interview and key takeaways from role-play exercises.

For the purposes of this study, interview responses and role-play observations relevant to leadership, humility, and dominance were created. Two role-play observations related to general communication skills were also created to increase the realism of the feedback. These particular observations were held constant across conditions. Moreover, to the extent possible, word choice, tone, and length were kept consistent across the different versions of assessment

19

feedback. Word length across the eight versions ranged from 521 words to 543 words (see Appendix B).

Humility. Humility was manipulated based on Owens et al.'s (2013) definition and operationalization of expressed humility. Specifically, they defined humility as "(a) a manifested willingness to view oneself accurately, (b) a displayed appreciation of others' strengths and contributions, and (c) teachability" (Owens et al., 2013, p. 1518). Therefore, interview responses and role-play observations reflected: disclosing strengths and weaknesses (e.g., "James openly discussed his strengths and achievements, along with his limitations and failures" / "James focused more on his strengths and achievements than on his limitations and failures"); appreciation ("James recognized others' strengths. He often brought attention to how other team members contributed to the team's success" / "James enjoyed when people recognized his strengths and appreciated his efforts"); and openness ("James frequently asked for others' help" / "James rarely asked for others' help, advice, or feedback").

Dominance. Dominance was manipulated based on Rosette et al.'s (2016, p. 4) definition of agentic dominance as the "pursuit of control and advancement over others," along with descriptions of dominance in the literature (Anderson & Kilduff, 2009; Carrier et al., 2014; Rudman & Glick, 2001). Generally, high dominance individuals have been described as assertive, ambitious, self-confident, forceful, and direct, which were reflected in the interview responses and role-play observations. For example, the male high dominance condition included interview responses such as "I have more of a take charge leadership style. I like to be the influencer in a team" and role-play observations such as "James appeared very interested in gaining power over others so that he had greater influence over outcomes." By contrast, the male low dominance condition included interview responses like "I have more of a relaxed leadership

style… I'm fine with letting others take charge" and role-play observations such as "James appeared less interested in gaining power over others or in gaining influence over outcomes."

Target Gender. Target gender was manipulated by the candidate's name and pronouns. The name James Miller was used in the male condition, whereas Jennifer Miller was used in the female condition.

Manipulation and Attention Checks

To check if the experimental manipulation was successful, participants answered questions about the candidate's humility, dominance, and gender. To assess humility, three items from Owens et al.'s (2013) expressed humility measure were used: "acknowledges when others have more knowledge and skills than himself/herself," "shows appreciation for the unique contributions of others," and "shows he/she is open to the ideas of others" ($\alpha = .97$). To assess dominance, three items from the dominance factor of the Revised Interpersonal Adjectives Scale (IAS-R; Wiggins et al., 1988) were used: dominant, assertive, and forceful ($\alpha = .96$). Additionally, gender was assessed by asking participants to select the candidate's gender, and two multiple-choice items served as an attention check (i.e., "What is the candidate's name?" and "Has the candidate held a formal leadership position before?"; see Appendix C).

Measures

Unless otherwise noted, all measures used a 7-point Likert format ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). All measures are reported in Appendix D. Demographic and personality items can be found in Appendix E.

Perceived Warmth. Participants' perceptions of the candidate's warmth were assessed using a 5-item scale created by Swain and Korenman (2018) from existing measures (Cuddy et

al., 2004; Mueller et al., 2011). Specifically, participants were asked to what extent they agree that the candidate is: warm, likeable, trustworthy, good-natured, and sincere ($\alpha = .94$).

Perceived Competence. Participants' perceptions of the candidate's competence were assessed using a 5-item scale created from existing measures (Cuddy et al., 2004; Mueller et al., 2011). This scale was modified from the 6-item version used by Swain and Korenman (2018). "Organized" was dropped from the scale, as it was not applicable to this study, leaving participants to rate the extent to which they agree that the candidate is: competent, capable, efficient, intelligent, and skillful ($\alpha = .92$).

Leadership Potential. Perceptions of leadership potential were measured with a modified version of Mueller et al.'s (2010) leadership potential scale. A composite was based on four items asking participants how much they agree that the candidate: "has the potential to advance to a leadership position," "has the potential to become an effective leader," "has the potential to learn leadership skills," and "has the potential to become a role model for his/her co-workers" ($\alpha = .94$). Additionally, three items pertaining to the candidate's perceived hireability were asked for potential exploratory research. These questions were adapted from Rudman and Glick's (1999) hiring index and were rated on a 5-point scale (i.e., not at all likely to extremely likely; $\alpha = .96$).

CHAPTER 3

RESULTS

Data Screening

Prior to analyses, data were screened for careless responding, missing values, and assumptions of multiple regression. Of the 237 participants who completed the study, 23 did not pass both attention checks and were removed from the sample. Additionally, 25 participants were removed for not meeting the pre-screening criteria. Other than two participants who did not indicate their gender, there were no missing data in the remaining sample. Therefore, these cases were retained, creating a final sample size of 187. Data screening supported adequate linearity between variables in the model and suggested no significant deviations from normality. There was evidence of heteroscedasticity between humility, perceived competence, and leadership potential. Rather than performing transformations of variables, inferential methods that do not assume homoscedasticity were used in the regression analyses (Hayes & Little, 2018). Finally, potential outliers were identified, though including and excluding these cases did not significantly change results. Therefore, they were retained within the final sample.

Manipulation Checks

For the humility manipulation check, a three-way ANOVA revealed main effects of humility ($F(1, 179) = 729.31$, $p < .001$, $\eta_p^2 = .80$, $M_{low} = 2.5$, $M_{high} = 6.4$) and dominance ($F(1, 179) = 76.92$, $p < .001$, $\eta_p^2 = .30$, $M_{low} = 5.0$, $M_{high} = 3.8$) on the candidate's perceived humility. There was no effect of target gender ($F(1, 179) = .04$, $p = .84$) on perceived humility and no interactions were significant. For the dominance manipulation check, a three-way ANOVA revealed main effects of dominance ($F(1, 179) = 635.88$, $p < .001$, $\eta_p^2 = .78$, $M_{low} = 2.7$, $M_{high} = 6.3$) and humility ($F(1, 179) = 8.35$, $p = .004$, $\eta_p^2 = .05$, $M_{low} = 4.7$, $M_{high} = 4.3$) on the

candidate's perceived dominance. There was no effect of target gender ($F(1, 179) = .01$, $p = .906$) on perceived dominance and no interactions were significant. Additionally, the target gender manipulation was successful with all participants reporting the correct gender for the leadership candidate in their assigned condition.

As seen in the ANOVA results above, the study's humility and dominance manipulations confounded one another. Examining the effect sizes, the impact of the humility manipulation on perceived dominance was relatively small ($\eta_p^2 = .05$) compared to the impact of the dominance manipulation. However, the impact of the dominance manipulation on perceived humility was noticeably stronger ($\eta_p^2 = .30$) and more concerning for the study's results. Although there could be flaws in the study's manipulations, based on existing works, it is also possible that perceptions of humility and dominance are not fully independent of one another. This reasoning is aligned with the "temperance-virtue concept" of humility, whereby humility "[tempers] other characteristics from going to extremes" (Owens et al., 2015, p. 1209). In the present study, this tempering effect meant that those who expressed humility were seen as less dominant, assertive, and forceful across conditions. Moreover, dominance, which has been associated with hubristic pride (Cheng et al., 2010) and narcissism (Bradlee & Emmons, 1992), likely has its own tempering effect on humility. Through their assertive and forceful behaviors, dominant individuals may create the impression that they are less open to and appreciative of others' ideas and contributions, as seen in the data. Though these explanations are plausible, the lack of empirical research on the relationship between humility and dominance perceptions makes it difficult to determine the source of the confounding.

Nevertheless, given the observed confounding effects, participants' assigned conditions were not used as independent variables in subsequent analyses. Instead, participants' responses

to the humility and dominance manipulation measures (i.e., their perceptions of the candidate's humility and dominance) were used in hypothesis testing.

Test of Hypotheses

Means, standard deviations, and correlations of all study variables are presented in Table 1. Unexpectedly, perceived humility had a positive relationship with perceived warmth, competence, and leadership potential, whereas perceived dominance had a negative relationship with perceived warmth and leadership potential and a nonsignificant relationship with perceived competence. Additionally, perceived warmth and competence were highly correlated with one another and were both strongly related to leadership potential. This finding aligns with the halo effect between warmth and competence that occurs when an individual target is evaluated in a non-comparative situation (Cuddy et al., 2011; Judd et al., 2005).

Given this halo effect, the correlations between study variables were reanalyzed, partialling out the shared variance between warmth and competence perceptions. After perceived competence was partialed out, correlation coefficients changed, but trends in direction and significance remained the same. However, after perceived warmth was partialed out, the correlation between perceived humility and competence decreased and was no longer significant ($r(184) = .01$, $p = .93$), while the correlation between perceived humility and leadership potential remained significant, $r(184) = .28$, $p < .001$. Further, the correlation between perceived dominance and competence became positive and significant ($r(184) = .39$, $p < .001$), as did the relationship between perceived dominance and leadership potential ($r(184) = .35$, $p < .001$). These latter findings were more in line with what was expected. Lastly, despite the high correlations between study variables, multicollinearity did not appear to be a serious issue. Correlations between independent variables were below .90, and all variance inflation factors

(VIFs) were less than 10 (Hair et al., 1995; Tabachnick & Fidell, 2007). However, the above findings point to the importance of controlling for covariance between perceived warmth and competence in subsequent analyses.

Next, a confirmatory factor analysis using item-level indicators was also conducted. A five-factor model provided an acceptable fit to the data (χ^2 (160, N = 187) = 426.50, p < .001, CFI = .94, RMSEA = .095) with the manipulation check measures, warmth and competence scales, and leadership potential composite loading onto separate factors. The chi-square was significant, likely indicating some multivariate non-normality in the data; however, the Incremental Fit (CFI) and Absolute Fit (RMSEA) indices met their thresholds of $\geq$ .90 and < .10, respectively. Further, a four-factor model in which warmth and competence items loaded on a single factor provided a worse fit (χ^2 (160, N = 187) = 864.42, p < .001, CFI = .85, RMSEA = .15), as did a three-factor model where warmth, competence, and leadership potential items loaded on a single factor (χ^2 (160, N = 187) = 1093.96, p < .001, CFI = .79, RMSEA = .17).

To test the study's three hypotheses, two conditional process models (moderated moderated mediation) were conducted using PROCESS Model 12 (Hayes & Little, 2018). Although PROCESS allows for multiple mediators within a single conditional process model, by default, the covariance between mediators is controlled for only during the second stage of moderated moderated mediation and when estimating the indirect and direct associations. Therefore, to control for the covariance between perceived warmth and competence across the two stages of moderated moderated mediation, two separate models were required.

The first model examined the conditional indirect association between perceived humility and leadership potential through perceived warmth, taking into account perceived dominance and target gender. In this model, perceived humility was entered as the independent variable,

perceived dominance and target gender as moderators, perceived warmth as the mediator, and leadership potential as the dependent variable. With the exception of the dependent variable, all variables were mean-centered prior to inclusion in the model. The dichotomous moderator, target gender, was coded such that female = -0.48 and male = 0.52. This was done to aid interpretability so that regression coefficients would represent the weighted average effect of regressors on the dependent variable between the male and female targets. Additionally, perceived competence and participant gender (female = -0.36, male = 0.64) were also mean-centered and entered as covariates because previous studies have found participants' gender to influence backlash effects (Rudman, Moss-Racusin, Glick, & Phelan, 2012). To reduce the effects of heteroscedasticity in the model, a heteroscedasticity-consistent standard error (HCSE) estimator was used. The particular HCSE estimator employed was HC3, which has been recommended in samples when there are not high leverage points and when $N \leq 250$ (Hayes & Cai, 2007; Long & Ervin, 2000). Further, to determine the statistical significance of the conditional indirect associations, percentile bootstrapping (10,000 times) was used to produce 95% confidence intervals (CIs).

A similar process was followed to conduct the second moderated moderated mediation model. In this model, perceived competence replaced perceived warmth as the mediator, and perceived warmth replaced perceived competence as a covariate. Thus, this model examined the conditional indirect association between perceived humility and leadership potential through perceived competence, taking into account perceived dominance and target gender (while controlling for perceived warmth). A depiction of the study's conceptual model can be found in Figure 1.

Hypotheses One and Two

To test the hypothesis that dominance and target gender will moderate the positive relationship between expressed humility and perceived warmth, a moderation model with perceived warmth as the dependent variable was estimated. It was expected that when dominance is high, the relationship would be stronger for men (hypothesis 1), and that when dominance is low, the relationship would be stronger for women (hypothesis 2b). Results indicated that the overall model was significant, $F(9, 177) = 128.38$, $p < .001$, $R^2 = .82$. The weighted average effect of perceived humility was positive ($b = .37$, $SE = .03$, $t(177) = 12.13$, $p < .001$, 95% CI [.31, .43]), whereas the weighted average effect of perceived dominance was negative, $b = -.21$, $SE = .03$, $t(177) = -7.17$, $p < .001$, CI [-.26, -.15]. The weighted average effect of target gender was not significant, $b = -.17$, $SE = .12$, $t(177) = -1.38$, $p = .17$, CI [-.40, .07]. Contrary to what was expected, the only significant interaction was between perceived humility and dominance, $b = -.02$, $SE = .01$, $t(177) = -2.11$, $p < .05$, CI [-.05, -.002]. The three-way interaction between perceived humility, dominance, and target gender was not significant, $b = -.002$, $SE = .02$, $t(177) = -0.09$, $p = .93$, CI [-.05, .04]. Therefore, hypotheses 1 and 2b were not supported.

To test the hypothesis that dominance and target gender will moderate the negative relationship between expressed humility and perceived competence, a moderation model with perceived competence as the dependent variable was estimated. It was expected that when dominance is low, the relationship would be stronger for men (hypothesis 2a). Results indicated that the overall model was significant, $F(9, 177) = 18.90$, $p < .001$, $R^2 = .54$. Contrary to what was expected, the weighted average effect of perceived humility was not significant, $b = -.02$, $SE = .04$, $t(177) = -0.47$, $p = .641$, 95% CI [-.11, .06]. The weighted average effect of target gender was also not significant, $b = -.09$, $SE = .12$, $t(177) = -0.78$, $p = .438$, CI [-.32, .14]. However, as expected, the weighted average effect of perceived dominance was positive, $b = .17$, $SE = .03$,

$t(177) = 5.44$, $p < .001$, CI [.11, .23]. No interactions were significant, including the three-way

interaction between perceived humility, dominance, and target gender, $b = -.01$, $SE = .02$, $t(177)$

$= -0.21$, $p = .833$, CI [-.05, .04]. Therefore, hypothesis 2a was not supported.

Hypothesis Three

To test the components of hypothesis 3, a final model that included perceived warmth

and competence as parallel mediators, perceived dominance and target gender as moderators, and

leadership potential as the dependent variable was estimated. It was expected that both perceived

warmth (hypothesis 3a) and competence (hypothesis 3b) would be positively related to

leadership potential. Results indicated that the overall model was significant, $F(10, 176) = 56.00$,

$p < .001$, $R^2 = .74$. In support of hypothesis 3a, perceived warmth was positively related to

leadership potential after controlling for perceived humility, dominance, competence, target

gender, and participant gender, $b = .26$, $SE = .10$, $t(176) = 2.69$, $p = .008$, 95% CI [.07, .45].

Likewise, in support of hypothesis 3b, perceived competence was also positively related to

leadership potential after controlling for perceived humility, dominance, warmth, target gender,

and participant gender, $b = .62$, $SE = .09$, $t(176) = 6.70$, $p < .001$, CI [.44, .80].

However, these results do not represent the conditional indirect associations between

perceived humility and leadership potential through the mediating variables. Rather, to test if

moderated moderated mediation was occurring, the bootstrap confidence intervals for the indices

of moderated moderated mediation were examined as recommended by Hayes and Little (2018).

According to hypothesis 3c, it was expected that there would be a positive indirect relationship

between expressed humility and leadership potential through perceived warmth, such that the

relationship would be stronger for men when dominance is high and stronger for women when

dominance is low. However, hypothesis 3c was not supported as the 95% bootstrap confidence

interval for the index of moderated moderated mediation for perceived warmth contained zero, CI [-.01, .01]. This indicated that the moderation of the indirect association (via perceived warmth) between perceived humility and leadership potential by perceived dominance was not moderated by target gender.

Similar results were seen for hypothesis 3d, which predicted that there would be a negative indirect relationship between expressed humility and leadership potential through perceived competence, such that the relationship would be stronger for men when dominance is low. The 95% bootstrap confidence interval for the index of moderated moderated mediation for perceived competence also contained zero, CI [-.03, 02]. Therefore, hypothesis 3d was not supported. There was no evidence that the moderation of the indirect association (via perceived competence) between perceived humility and leadership potential by perceived dominance was moderated by target gender. Additionally, the three-way interaction between perceived humility, dominance, and target gender on leadership potential was not significant in the final model, $b = .03$, $SE = .03$, $t(176) = 1.19$, $p = .235$, CI [-.02, 09]. This indicated that the direct association between perceived humility and leadership potential was not moderated by both perceived dominance and target gender when controlling for perceived warmth, competence, and participant gender.

Exploratory Analyses

The above results suggest that target gender was not an effective moderator of the tested associations. Across all models, there were no significant gender differences found in terms of weighted average effects or in the interactions with perceived humility and/or dominance. However, there was evidence of perceived dominance's moderating influence on the relationships between perceived humility and warmth ($b = -.02$, $SE = .01$, $t(177) = -2.11$, $p < .05$,

CI [-.05, -.002]) and perceived humility and leadership potential, $b = .05$, $SE = .01$, $t(176) = 3.61$, $p < .001$, CI [.02, .08].

To further explore this potential moderated mediation, new conditional process models were conducted using PROCESS Model 8 (Hayes & Little, 2018). As before, two separate models were run so that the covariance between perceived warmth and competence could be controlled for across all stages of moderated mediation. The first model examined the conditional indirect association between perceived humility and leadership potential through perceived warmth, taking into account perceived dominance only. It also examined if there was moderation of the direct association between perceived humility and leadership potential by perceived dominance. Similar to the previous model, perceived humility was entered as the independent variable, perceived dominance as the sole moderator, perceived warmth as the mediator, and leadership potential as the dependent variable. With the exception of the dependent variable, all variables (including covariates) were mean-centered prior to inclusion in the model. Perceived competence, target gender (female = -0.48, male = 0.52), and participant gender (female = -0.36, male = 0.64) were entered as covariates. The heteroscedasticity-consistent standard error estimator, HC3, was again employed in this model, and percentile bootstrapping (10,000 times) was used to produce 95% confidence intervals for inference about indirect associations. All significant interactions were probed at one standard deviation above (+1 $SD = 6.6$) and one standard deviation below (-1 $SD = 2.4$) the mean of perceived dominance ($M = 4.5$).

A similar process was used to conduct the second moderated mediation model. In this model, perceived competence replaced perceived warmth as the mediator, and perceived warmth replaced perceived competence as a covariate. Thus, this model examined the conditional indirect association between perceived humility and leadership potential through perceived

competence, taking into account perceived dominance only (while controlling for perceived warmth).

Conditional Indirect Associations

Perceived Humility, Dominance, and Warmth. A moderation model with perceived warmth as the dependent variable was first estimated. The overall model was significant, F(6, 180) = 203.01, $p < .001$, $R^2 = .82$. As expected, a significant interaction between perceived humility and dominance was found, $b = -.02$, $SE = .01$, t(180) = -2.27, $p = .024$, 95% CI [-.05, -.003]; $\Delta R^2 = .01$. Thus, perceived humility's relationship with perceived warmth differed as a function of dominance perceptions when controlling for perceived competence, target gender, and participant gender (see Figure 2). Probing the interaction revealed that this relationship was positive and significant across levels of low ($b = .43$, $SE = .04$, t(180) = 11.83, $p < .001$, CI [.35, .50]), moderate ($b = .37$, $SE = .03$, t(180) = 12.24, $p < .001$, CI [.31, .43]), and high ($b = .32$, $SE = .04$, t(180) = 8.07, $p < .001$, CI [.24, .40]) dominance. Thus, candidates who were seen as humbler also received higher warmth ratings, with this relationship being strongest when dominance was low.

Next, to see if perceived dominance was also moderating the indirect association between humility and leadership potential through perceived warmth, the index of moderated mediation for perceived warmth was examined. The 95% bootstrap confidence interval for the index was negative and did not include zero, CI [-.01, -.001]. This supports that the indirect association (via perceived warmth) between perceived humility and leadership potential was negatively moderated by perceived dominance when controlling for perceived competence, target gender, and participant gender. Probing the interaction revealed that the conditional indirect association was positive and strongest at low levels of dominance ($b = .11$, $SE = .04$, CI [.04, .19]) in

32

comparison to moderate ($b = .10$, $SE = .03$, CI [.03, .17]) and high ($b = .09$, $SE = .03$, CI [.03, .15]) levels of dominance.[1]

Perceived Humility, Dominance, and Competence. Next, a moderation model with perceived competence as the dependent variable was estimated. The overall model was significant, $F(6, 180) = 26.77$, $p < .001$, $R^2 = .53$. However, the interaction between perceived humility and dominance was not significant, $b = .002$, $SE = .01$, $t(180) = 0.12$, $p = .904$, 95% CI [-.02, .03]. This supported that the relationship between perceived humility and competence was not dependent on dominance perceptions when controlling for perceived warmth, target gender, and participant gender. Moreover, perceived humility was not significantly related to perceived competence ($b = -.01$, $SE = .04$, $t(180) = -0.35$, $p = .724$, CI [-.10, .07]), whereas the weighted average effect of perceived dominance was positive, $b = .16$, $SE = .03$, $t(180) = 5.52$, $p < .001$, CI [.11, .22]. Similar results were found when examining the index of moderated mediation for perceived competence. The 95% bootstrap confidence interval for the index included zero (CI [-.01, .02]), which indicated that the indirect association (via perceived competence) between perceived humility and leadership potential was not moderated by perceived dominance when controlling for perceived warmth, target gender, and participant gender.

Conditional Direct Associations

Perceived Humility, Dominance, and Leadership Potential. A final model that included perceived warmth and competence as parallel mediators, perceived dominance as a moderator, and leadership potential as the dependent variable was estimated. The overall model was significant, $F(7, 179) = 79.37$, $p < .001$, $R^2 = .73$. Additionally, the interaction between perceived humility and dominance was also significant, $b = .05$, $SE = .01$, $t(179) = 3.71$, $p <$

---

[1] Percentile bootstrapping (10,000 times) was used to estimate standard errors and 95% confidence intervals for indirect associations.

.001, 95% CI [.02, .08]; ΔR^2 = .02. This indicated that, after controlling for perceived warmth, competence, target gender, and participant gender, the direct association between perceived humility and leadership potential was positively moderated by perceived dominance (see Figure 3). Probing the interaction revealed that the direct association was not significantly different from zero when perceived dominance was low, b = .08, SE = .07, $t(179)$ = 1.26, p = .208, CI [-.05, .21]. However, the direct association was positive and significantly different from zero at both moderate (b = .19, SE = .05, $t(179)$ = 3.41, p = .001, CI [.08, .29]) and high (b = .29, SE = .06, $t(179)$ = 5.12, p < .001, CI [.18, .40]) levels of dominance. These results suggest that, among candidates seen as equal in warmth and in competence, the association between perceived humility and leadership potential was strongest at high levels of dominance.

CHAPTER 4

DISCUSSION

While research on humble leadership has grown in recent years, most studies have concentrated on its outcomes rather than its origins and antecedents (Wang, Owens, et al., 2018). This has resulted in mixed views of humility's impact on leadership, along with a limited understanding of how humble individuals become leaders. Addressing this gap, the present study investigated the relationship between expressed humility and leadership potential, as mediated by perceived warmth and competence. Further, to test if a paradoxical blend of humility and agency would benefit aspiring leaders, the study also examined how perceived dominance and target gender influenced this relationship.

First, it was hypothesized that dominance and target gender would moderate the positive relationship between expressed humility and perceived warmth. It was expected that when dominance is high, this relationship would be stronger for men, and that when dominance is low, this relationship would be stronger for women. Although a positive relationship between humility and perceived warmth was found, there was a lack of moderated moderation, so hypotheses 1 and 2b were not supported. By extension, hypothesis 3c, which predicted that there would be a moderated moderated mediation relationship between expressed humility and leadership potential through perceived warmth was also not supported. Further, it was also hypothesized that dominance and target gender would moderate the negative relationship between expressed humility and perceived competence, such that when dominance is low, the relationship would be stronger for men. Contrary to what was expected, humility did not have a significant relationship with perceived competence nor was there evidence of moderated moderation. Thus, hypothesis 2a was not supported. By extension, hypothesis 3d, which

predicted that there would be a moderated moderated mediation relationship between expressed humility and leadership potential through perceived competence was also not supported.

In support of hypotheses 3a and 3b, perceived warmth and competence were found to be positively related to leadership potential after controlling for perceived humility, dominance, target gender, and participant gender. Additionally, competence perceptions had a stronger association with leadership potential, and perceived warmth and competence were found to be strongly and positively related to one another. These findings represent the halo effect that exists between warmth and competence in non-comparative contexts (i.e., when only one leadership candidate is being evaluated; Cuddy et al., 2011; Judd et al., 2005). When these halo effects were not controlled for, humbler leadership candidates were rated as having greater warmth *and* competence. However, when warmth was held constant, there was no apparent relationship between perceived humility and competence. A similar effect was found for dominance. When halo effects were not controlled for, perceived dominance was not significantly related to perceived competence and negatively related to leadership potential. Yet, when warmth was held constant, perceived dominance had the anticipated positive relationships with both competence and leadership potential.

Given the lack of gender differences in results, exploratory analyses were conducted to test a pared-down moderated mediation model, using target gender as a covariate instead of as a moderator. These analyses revealed that there was a conditional indirect association between expressed humility and leadership potential through perceived warmth. Perceived dominance moderated this relationship, such that humbler candidates were rated as having more leadership potential (via perceived warmth) across low, moderate, and high levels of dominance. Yet, the strength of this association slightly increased as perceived dominance decreased. Thus,

candidates lower in dominance appeared to *indirectly* benefit the most from their humility; their humility helped them be seen as relatively warmer, which was associated with greater leadership potential. Moreover, these analyses also indicated that there was a positive direct association between humility and leadership potential that was contingent on dominance perceptions. At low levels of dominance, this relationship was not significant. However, this relationship was significant at moderate and high levels of dominance, such that expressed humility had the strongest association with leadership potential at high levels of dominance. Therefore, candidates higher in dominance appeared to *directly* benefit the most from their humility.

Implications

This study has several theoretical implications. First, it adds to the scant literature on expressed humility and leadership potential, as only one other study has examined this relationship. Though this previous study by Swain and Korenman (2018) was conducted using a U.S. Army sample, its results are similar to the present research. Thus, in both military and business contexts, expressed humility has a positive association with perceptions of leadership potential. This was surprising because, outside of the military, humility has not been seen as a quintessential characteristic of organizational leadership (Offerman & Coats, 2018).

Making an additional contribution to the literature, the present study sheds light on the mechanisms underlying this positive relationship by investigating warmth and competence as mediators. Thus far, there has been limited research on expressed humility and the Big Two of social perception, and the present study's findings diverge somewhat from past results. Similar to other works (Swain & Korenman, 2018; Zapata & Hayes-Jones, 2019), humility was found to have a positive relationship with the warmth-communion dimension. However, Zapata and Hayes-Jones (2019) found that humility was negatively related to the agency-competence

37

dimension, whereas the present study found no significant relationship. This is likely due to Zapata and Hayes-Jones' inclusion of the agentic portion of the dimension, whereas the present study isolated the dimension to competence alone.

When narrowed down to just competence in the current study, there was no evidence that expressed humility created competence costs, which was a concern raised by Owens and Hekman (2012). It is possible that rather than signaling incompetence, the hallmarks of expressed humility, such as admitting limitations and seeking others' help, were seen as normal (or potentially admirable) behaviors by participants. After all, aspiring leaders cannot know everything. So, when used within reason, humble behaviors may actually serve to "[establish] leadership credibility in an unknowable world" instead of taking away from leadership competence (Weick, 2001, p. 112). Additionally, results also indicate that a humbler individual can be seen as more competent in certain contexts by virtue of their perceived warmth and its halo effect. This finding points to the importance of including both warmth and competence measures within leadership studies.

Furthermore, although there were no competence costs found in the present study, there was evidence of warmth benefits. Specifically, humbler candidates were perceived as having greater warmth, which was positively related to leadership potential due to its prototypicality. This partly explains the positive relationship between expressed humility and leadership potential, but it does not account for the association in its entirety. Instead, expressed humility was also found to have a direct relationship with leadership potential. A potential explanation for this is that participants may have viewed expressed humility itself as prototypical of leadership. In other words, they may have believed that being self-aware, appreciative of others, and teachable were characteristic of leaders. This is an area for future research, as no existing studies

have examined whether the behavioral manifestations of expressed humility are seen as prototypical of leadership. Moreover, it is also possible that expressed humility afforded candidates other distinct advantages that strengthened leadership potential. After all, leadership potential is more than just a reflection of prototypicality, it also includes learning leadership skills and being a role model for colleagues (Mueller et al., 2010). Therefore, by being growth-oriented, open-minded, and other-oriented (Owens et al., 2013), humbler candidates were likely seen as a better fit for these aspects of leadership potential.

Additionally, this study also contributes to paradoxical leadership research by examining how blending humility with agentic dominance relates to leadership potential. Similar to works on expressed humility, power (Wang, Owens, et al., 2018), and narcissism (Owens et al., 2015), it was found that demonstrating a combination of highly humble and highly dominant behaviors was advantageous for aspiring leaders. Specifically, when perceived dominance was moderate or high, humbler candidates were rated as having greater leadership potential indirectly through warmth *and* by receiving direct benefits of their expressed humility. By contrast, when perceived dominance was low, humbler candidates were rated as having greater leadership potential indirectly through warmth *only*; they did not receive any direct benefits from their expressed humility. Further, comparing the magnitude of the conditional indirect (via warmth) and conditional direct associations showed that the conditional direct associations between humility and leadership potential were stronger. This further reinforced that demonstrating a blend of high humility and high dominance was the most fruitful strategy for aspiring leaders.

Given these results, in the present study, dominance functioned as a boundary condition for humility's benefits, rather than as a buffer for its potential disadvantages. This aligns with Wang, Owens, et al.'s (2018, p. 1033) conclusion that when "humility is combined with some

power base, its positive effect is magnified." In this case, the candidates who combined humility with dominance demonstrated the social skills and, importantly, the agentic skills that are looked for in leaders (Cuddy et al., 2011; Judge et al., 2002; Lord et al., 1986; Offerman & Coats, 2018). As a result, they likely appeared to be the most leader-like and growth-oriented candidates. On the other hand, when dominance was lacking, candidates likely appeared less leader-like. So, while humbler candidates still experienced warmth benefits that were tied to perceptions of leadership potential, their humility had less overall value because it was not supplemented with agentic behaviors (Offerman & Coats, 2018; Wang, Owens, et al., 2018). Essentially, there was an agentic threshold that aspiring leaders needed to meet in order for their humility to have the most benefits.

Moreover, this study also adds to the backlash literature. Unexpectedly, there were no significant gender differences found except for the negative correlation between target gender and leadership potential, such that the male candidate was seen as having less leadership potential than the female candidate. This relationship was surprising given that role congruity (Eagly & Karau, 2002) and backlash (Rudman & Phelan, 2008) theories have asserted the opposite. However, this relationship was no longer significant after other study variables were controlled for. There are a few possible explanations for the lack of significant gender differences in the present study. First, the gender stimuli may have been too weak to elicit backlash. Although some backlash effects have been found when using written materials (e.g., Bosak et al., 2018), stronger backlash effects tend to occur through observations or interactions with atypical targets (Rudman, Moss-Racusin, Glick, & Phelan, 2012). Second, Bosak et al. (2018) have suggested that professional samples, particularly those with hiring experience, may have more awareness of gender bias in leadership and hiring decisions and may actively seek to

avoid it. Thus, the current sample may have been sensitive to providing gender-biased responses, especially against females. Third, it is also possible that the effects of gender differences and backlash were simply too small to detect given the power of the present study.

Lastly, this study also has practical implications for aspiring leaders and organizations. Beginning with aspiring leaders, this study echoes the paradoxical advice that has been given to incumbent leaders: supplement humble behaviors with dominant behaviors (and vice versa). Results of this study and other works (Owens et al., 2015; Wang, Owens, et al., 2018; Zhang et al., 2015) support that this is not only an effective strategy for strengthening leadership performance and follower outcomes but also for strengthening perceptions of leadership potential. Though the dominance portion of this advice likely comes as no surprise, people may assume that humility is not a trait or strength worth highlighting when trying to be seen as leader-like (Exline & Geyer, 2004). During selection and promotion processes, humble individuals probably overlook the value that their humility can add, given the emphasis on self-promotion in these contexts (Bolino et al., 2008). However, humble and dominant behaviors can work in tandem to increase perceptions of leadership prototypicality and potential. Importantly, based on existing works (e.g., Rudman & Phelan, 2008), this balanced approach should lead to positive results for men and women alike.

Moreover, the study's results also reinforce the important role that competence perceptions play in leadership evaluations, as perceived competence had one of the strongest relationships with leadership potential. Though dominance can signal competence, as seen in the current study, aspiring leaders would fare better if they were intentional about demonstrating competence in addition to humility and dominance. This can be done by showing analytical skills (i.e., strategic insight, decision-making, and problem-solving skills; Dries & Pepermans,

41

2012). Finally, given the halo effects that emerged when evaluating potential leaders, organizations are urged to limit this bias through appropriate training and more robust selection and promotion processes. Incorporating multiple assessment procedures (e.g., structured interviews, cognitive tests, personality inventories, job simulations) can result in more effective selection and promotion decisions (Salgado, 2017).

Limitations and Future Directions

Despite the contributions of this study, it is not without limitations. First, the confounding effects between the humility and dominance manipulations meant that manipulation check measures took the place of experimental conditions during hypothesis testing. Consequently, the study results were no longer based on an experimental design. Instead, results were correlational in nature, meaning that causality cannot be inferred and reverse causality is possible. For instance, beliefs about the candidate's leadership potential may have caused perceptions of warmth and potentially influenced perceptions of humility and dominance. Nevertheless, given that warmth is prototypical of leadership (Cuddy et al., 2011; Offerman & Coats, 2018), the positive associations between expressed humility, warmth, and leadership potential are informative and still help explain why humility is related to leadership evaluations.

Moreover, though the observed spillover between expressed humility and dominance is interesting and not entirely unexpected given existing works (e.g., Owens et al., 2015; Zapata & Hayes-Jones, 2019), future studies should design and employ cleaner manipulations of these constructs. Along these lines, more work on the relationship between perceptions of humility and dominance is warranted. It may be that this relationship is hydraulic, which would make experimental manipulations a challenge. Furthermore, another potential limitation is the present study's gender manipulation. Only modifying the name and pronouns of the leadership candidate

may not have made gender salient enough during the study. Though asking participants to report the candidate's gender near the start of the experiment likely primed participants, stronger gender manipulations (e.g., video vignettes) may have been necessary to observe the hypothesized backlash effects. Future studies would likely benefit from using stronger gender manipulations.

An additional limitation is that all ratings for the leadership candidate came from the same source. It is likely that common method bias inflated certain observed relationships, though the use of multiple variables and interaction terms in regression analyses likely decreased some of the impact of common method variance in the study (Siemsen et al., 2010). To address common method variance and causality concerns, future studies could use multiple sources and stages to measure the variables of interest. For example, self-reports of aspiring leaders' dominance could be used in field studies, along with employing multiple raters to assess targets' expressed humility, warmth, competence, and leadership potential over time.

Further, this study's pre-screening measures were both an advantage and a limitation. Although pre-screening provided a professional sample that increased generalizability to the workplace, it also limited the sample's diversity and size. Therefore, future studies should explore how humility, dominance, and gender influence leadership potential outside of business industries. Additionally, as suggested by Bosak et al. (2018), using a professional sample without hiring experience may elicit more backlash effects in subsequent studies while also providing valuable insights into how general organizational members (as opposed to organizational decision-makers) perceive aspiring humble leaders. Likewise, recruiting larger samples for future field and laboratory research would increase the ability to detect gender differences and backlash effects, which may be small. The sample size of the current study was smaller than the target

sample size. And though small effects were found, the study's limited power may have obscured true backlash effects created by different combinations of humility, dominance, and gender.

Lastly, the present work only scratches the surface of the relationship between expressed humility and leadership potential. There are many directions that future research in this area can explore. To start, few studies have investigated the effects of excessive humility (Yuan et al., 2018), including the current work. It is likely that excessive demonstrations of humility decrease perceptions of leadership potential, even when accompanied by dominant behaviors. Future studies should explore this potential curvilinear relationship and how it is influenced by dominance. Additionally, future research should also examine how humility affects perceptions of warmth, competence, and leadership potential in a comparative context with multiple leadership candidates. Past studies have supported that comparative contexts trigger contrast effects instead of halo effects between warmth and competence (Cuddy et al., 2011). Therefore, a candidate perceived as warm is often assumed to be less competent. Given that expressed humility was associated with perceived warmth but not competence in the present study, this may put humble candidates at a disadvantage, particularly if they are also seen as lacking agentic qualities.

Furthermore, culture also plays an important role in leadership prototypicality and perceptions (Javidan et al., 2010). Therefore, in some cultures—organizational or national— humility may be beneficial for being seen as leader-like, whereas it may be inconsequential or potentially harmful in others. Future studies should explore organizational and national culture as potential moderators of the relationship between expressed humility and leadership potential. Finally, this study examined leadership potential from the perspective of outside observers. Yet, an individual's perception of his or her own leadership potential also has an impact on leadership

emergence and selection processes (DeRue & Ashford, 2010). Thus, future research should investigate how humble individuals view their own leadership potential and how this shapes their leadership motivations and behaviors.

Conclusion

The current work makes a humble contribution to leadership research by examining the relationship between expressed humility and leadership potential. Although the hypothesized moderated moderated mediation model was not supported, exploratory analyses revealed that aspiring leaders received the most benefit from humility when they were also perceived as moderately or highly dominant. In these conditions, humbler individuals were seen as having greater leadership potential both directly and indirectly through stronger warmth perceptions. Thus, this study supports the paradoxical advice of blending humility with agency, while also acknowledging that more work is needed to determine how effective this leadership strategy is for different genders.

REFERENCES

Anderson, C., & Kilduff, G. J. (2009). Why do dominant personalities attain influence in face-to-face groups? The competence-signaling effects of trait dominance. *Journal of Personality and Social Psychology, 96*(2), 491–503. https://doi.org/10.1037/a0014201

Bales, R. F. (1950). A set of categories for the analysis of small group interaction. *American Sociological Review, 15,* 257–263. https://doi.org/10.2307/2086790

Bolino, M. C., Kacmar, K. M., Turnley, W. H., & Gilstrap, J. B. (2008). A multi-level review of impression management motives and behaviors. *Journal of Management, 34*(6), 1080–1109. https://doi.org/10.1177/0149206308324325

Bosak, J., Kulich, C., Rudman, L., & Kinahan, M. (2018). Be an advocate for others, unless you are a man: Backlash against gender-atypical male job candidates. *Psychology of Men & Masculinity, 19*(1), 156–165. https://doi.org/10.1037/men0000085

Bradlee, P. M., & Emmons, R. A. (1992). Locating narcissism within the interpersonal circumplex and the Five-Factor model. *Personality and Individual Differences, 13*(7), 821–830. https://doi.org/10.1016/0191-8869(92)90056-U

Cheng, J. T., Tracy, J. L., & Henrich, J. (2010). Pride, personality, and the evolutionary foundations of human social status. *Evolution and Human Behavior, 31*(5), 334–347. https://doi.org/10.1016/j.evolhumbehav.2010.02.004

Collins, N. L., & Miller, L. C. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin, 116*(3), 457–475. https://doi.org/10.1037/0033-2909.116.3.457

Cuddy, A. J. C., Glick, P., & Beninger, A. (2011). The dynamics of warmth and competence judgments, and their outcomes in organizations. *Research in Organizational Behavior, 31*, 73–98. https://doi.org/10.1016/j.riob.2011.10.004

Cuddy, A.J.C., Fiske, S.T. and Glick, P. (2004), When professionals become mothers, warmth doesn't cut the ice. *Journal of Social Issues, 60*, 701–718. https://doi.org/10.1111/j.0022-4537.2004.00381.x

Davis, D. E., McElroy, S. E., Rice, K. G., Choe, E., Westbrook, C., Hook, J. N., Van Tongren, D. R., DeBlaere, C., Hill, P., Placares, V., & Worthington Jr., E. L. (2016). Is modesty a subdomain of humility? *The Journal of Positive Psychology, 11*(4), 439–446. https://doi.org/10.1080/17439760.2015.1117130

DeRue, D. S., & Ashford, S. J. (2010). Who will lead and who will follow? A social process of leadership identity construction in organizations. *The Academy of Management Review, 35*(4), 627–647. https://doi.org/10.5465/AMR.2010.53503267

Dries, N., & Pepermans, R. (2012). How to identify leadership potential: Development and testing of a consensus model. *Human Resource Management, 51*(3), 361–385. https://doi.org/10.1002/hrm.21473

Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review, 109*(3), 573–598. https://doi.org/10.1037/0033-295X.109.3.573

Eagly, A. H., Nater, C., Miller, D. I., Kaufmann, M., & Sczesny, S. (2020). Gender stereotypes have changed: A cross-temporal meta-analysis of U.S. public opinion polls from 1946 to 2018. *American Psychologist, 75*(3), 301–315. https://doi.org/10.1037/amp0000494

Exline, J. J., & Geyer, A. L. (2004). Perceptions of humility: A preliminary study. *Self and Identity, 3*(2), 95–114. https://doi.org/10.1080/13576500342000077

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Fiske, S. T. (2018). Stereotype content: Warmth and competence endure. *Current Directions in Psychological Science, 27*(2), 67–73. https://doi.org/10.1177/0963721417738825

Fiske, S. T., & Taylor, S. E. (1991). *Social cognition* (2nd ed.). Mcgraw-Hill Book Company.

Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology, 82*(6), 878–902. https://doi.org/10.1037/0022-3514.82.6.878

Forsyth, D. R., & Nye, J. L. (2008). Seeing and being a leader: The perceptual, cognitive, and interpersonal roots of conferred influence. In C. L. Hoyt, G. R. Goethals, & D. R. Forsyth (Eds.), *Leadership at the crossroads: Leadership and Psychology* (Vol. 1, pp. 116–131). Praeger.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. (1995). *Multivariate data analysis (4th ed.)*. Prentice Hall.

Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication Monographs, 85*(1), 4–40. https://doi.org/10.1080/03637751.2017.1352100

Hayes, A. F., & Cai, L. (2007). Using heteroskedasticity-consistent standard error estimators in OLS regression: An introduction and software implementation. *Behavior Research Methods, 39*(4), 709–722. https://doi.org/10.3758/BF03192961

Hayes, A. F., & Little, T. D. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). The Guilford Press.

Hill, P. C., & Sandage, S. J. (2016). The promising but challenging case of humility as a positive psychology virtue. *Journal of Moral Education, 45*(2), 132–146. https://doi.org/10.1080/03057240.2016.1174675

Hogan, R., Curphy, G. J., & Hogan, J. (1994). What we know about leadership: Effectiveness and personality. *American Psychologist, 49*(6), 493–504. https://doi.org/10.1037/0003-066X.49.6.493

Javidan, M., Dorfman, P.W., Howell, J.P., & Hanges, P.J. (2010). Leadership and cultural context: A theoretical and empirical examination based on Project GLOBE. In N. Nohria & R. Khurana (Eds.), *Handbook of leadership theory and practice* (pp. 335–376). Harvard Business School Press.

Judd, C. M., James-Hawkins, L., Yzerbyt, V., & Kashima, Y. (2005). Fundamental dimensions of social judgment: Understanding the relations between judgments of competence and warmth. *Journal of Personality and Social Psychology, 89*(6), 899–913.

Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology, 87*(4), 765–780. https://doi.org/10.1037/0021-9010.87.4.765

Judge, T. A., Colbert, A. E., & Ilies, R. (2004). Intelligence and leadership: A quantitative review and test of theoretical propositions. *Journal of Applied Psychology, 89*(3), 542–552. https://doi.org/10.1037/0021-9010.89.3.542

Koenig, A. M., Eagly, A. H., Mitchell, A. A., & Ristikari, T. (2011). Are leader stereotypes masculine? A meta-analysis of three research paradigms. *Psychological Bulletin, 137*(4), 616–642. https://doi.org/10.1037/a0023557

Kruse, E., Chancellor, J., & Lyubomirsky, S. (2017). State humility: Measurement, conceptual validation, and intrapersonal processes. *Self and Identity, 16*(4), 399–438. https://doi.org/10.1080/15298868.2016.1267662

Lee, F. (2002). The social costs of seeking help. *Journal of Applied Behavioral Science, 38*(1), 17–35. https://doi.org/10.1177/0021886302381002

Lee, T. L., & Fiske, S. T. (2008). Social cognitive perspectives on leadership. In C. L. Hoyt, G. R. Goethals, & D. R. Forsyth (Eds.), *Leadership at the crossroads: Leadership and Psychology* (Vol. 1, pp. 101–115). Praeger.

Long, J. S., & Ervin, L. H. (2000). Using heteroscedasticity consistent standard errors in the linear regression model. *The American Statistician, 54*(3), 217–224. https://doi.org/10.1080/00031305.2000.10474549

Lord, R. G., & Maher, K. J. (1991). *People and organizations, Vol. 1. Leadership and information processing: Linking perceptions and performance.* Unwin Hyman.

Lord, R. G., Day, D. V., Zaccaro, S. J., Avolio, B. J., & Eagly, A. H. (2017). Leadership in applied psychology: Three waves of theory and research. *Journal of Applied Psychology, 102*(3), 434-451. https://doi.org/10.1037/apl0000089

Lord, R. G., de Vader, C. L., & Alliger, G. M. (1986). A meta-analysis of the relation between

    personality traits and leadership perceptions: An application of validity generalization

    procedures. *Journal of Applied Psychology, 71*(3), 402–410.

    https://doi.org/10.1037/0021-9010.71.3.402

Lord, R. G., Epitropaki, O., Foti, R. J., & Hansbrough, T. K. (2020). Implicit leadership theories,

    implicit followership theories, and dynamic processing of leadership information. *Annual*

    Review of Organizational Psychology and Organizational Behavior, 7(1), 49–74.

    https://doi.org/10.1146/annurev-orgpsych-012119-045434

Lord, R. G., Foti, R. J., & De Vader, C. L. (1984). A test of leadership categorization theory:

    Internal structure, information processing, and leadership perceptions. *Organizational*

    Behavior and Human Performance, 34(3), 343–378. https://doi.org/10.1016/0030-

    5073(84)90043-6

McElroy-Heltzel, S. E., Davis, D. E., DeBlaere, C., Worthington, E. L., & Hook, J. N. (2019).

    Embarrassment of riches in the measurement of humility: A critical review of 22

    measures. *The Journal of Positive Psychology, 14*(3), 393–404.

    https://doi.org/10.1080/17439760.2018.1460686

Moss-Racusin, C. A., Phelan, J. E., & Rudman, L. A. (2010). When men break the gender rules:

    Status incongruity and backlash against modest men. *Psychology of Men & Masculinity,*

    11(2), 140–151. https://doi.org/10.1037/a0018093

Mueller, J. S., Goncalo, J. A., & Kamdar, D. (2011). Recognizing creative leadership: Can

    creative idea expression negatively relate to perceptions of leadership potential? *Journal*

    of Experimental Social Psychology, 47(2), 494–498.

    https://doi.org/10.1016/j.jesp.2010.11.010

Nielsen, R., & Marrone, J. A. (2018). Humility: Our current understanding of the construct and its role in organizations: Humility. *International Journal of Management Reviews, 20*(4), 805–824. https://doi.org/10.1111/ijmr.12160

Offermann, L. R., & Coats, M. R. (2018). Implicit theories of leadership: Stability and change over two decades. *The Leadership Quarterly, 29*(4), 513–522. https://doi.org/10.1016/j.leaqua.2017.12.003

Offermann, L., & Foley, K. (2020, February 28). Is there a female leadership advantage? In *Oxford Research Encyclopedia of Business and Management.* Retrieved March 25, 2020, from https://oxfordre.com/business/view/10.1093/acrefore/9780190224851.001.0001/acrefore-9780190224851-e-61

Ou, A. Y., Waldman, D. A., & Peterson, S. J. (2018). Do humble CEOs matter? An examination of CEO humility and firm outcomes. *Journal of Management, 44*(3), 1147–1173. https://doi.org/10.1177/0149206315604187

Owens, B. P., & Hekman, D. R. (2012). Modeling how to grow: An inductive examination of humble leader behaviors, contingencies, and outcomes. *Academy of Management Journal, 55*(4), 787–818. https://doi.org/10.5465/amj.2010.0441

Owens, B. P., & Hekman, D. R. (2016). How does leader humility influence team performance? Exploring the mechanisms of contagion and collective promotion focus. *Academy of Management Journal, 59*(3), 1088–1111. https://doi.org/10.5465/amj.2013.0660

Owens, B. P., Johnson, M. D., & Mitchell, T. R. (2013). Expressed humility in organizations: Implications for performance, teams, and leadership. *Organization Science, 24*(5), 1517–1538. https://doi.org/10.1287/orsc.1120.0795

Owens, B. P., Wallace, A. S., Walker, A. S., & Waldman, D. A. (2015). Leader narcissism and

    follower outcomes: The counterbalancing effect of leader humility. *The Journal of*

    Applied Psychology, 100(4), 1203–1213. https://doi.org/10.1037/a0038698

Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and*

    classification. American Psychological Association.

Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item

    short version of the Big Five Inventory in English and German. *Journal of Research in*

    Personality, 41(1), 203–212. https://doi.org/10.1016/j.jrp.2006.02.001

Rosette, A. S., Koval, C. Z., Ma, A., & Livingston, R. (2016). Race matters for women leaders:

    Intersectional effects on agentic deficiencies and penalties. *The Leadership Quarterly,*

    27(3), 429–445. https://doi.org/10.1016/j.leaqua.2016.01.008

Rudman, L. A., & Glick, P. (1999). Feminized management and backlash toward agentic

    women: The hidden costs to women of a kinder, gentler image of middle

    managers. *Journal of Personality and Social Psychology, 77*(5), 1004–1010.

    https://doi.org/10.1037/0022-3514.77.5.1004

Rudman, L. A., & Phelan, J. E. (2008). Backlash effects for disconfirming gender stereotypes in

    organizations. *Research in Organizational Behavior, 28*, 61–79.

    https://doi.org/10.1016/j.riob.2008.04.003

Rudman, L. A., Moss-Racusin, C. A., Glick, P., & Phelan, J. E. (2012). Reactions to vanguards:

    Advances in backlash theory. In P. Devine & A. Plant (Eds.), *Advances in experimental*

    social psychology, Vol. 45 (Vol. 45, pp. 167–227). Academic Press.

    https://doi.org/10.1016/B978-0-12-394286-9.00004-4

Rudman, L. A., Moss-Racusin, C. A., Phelan, J. E., & Nauts, S. (2012). Status incongruity and

    backlash effects: Defending the gender hierarchy motivates prejudice against female

    leaders. *Journal of Experimental Social Psychology, 48*(1), 165–179.

    https://doi.org/10.1016/j.jesp.2011.10.008

Salgado, J. (2017, March 29). Personnel Selection. *Oxford Research Encyclopedia of*

    Psychology. Retrieved 31 Oct. 2020, from

    https://oxfordre.com/psychology/view/10.1093/acrefore/9780190236557.001.0001/acrefo

    re-9780190236557-e-8.

Schock, A., Gruber, F. M., Scherndl, T., & Ortner, T. M. (2019). Tempering agency with

    communion increases women's leadership emergence in all-women groups: Evidence for

    role congruity theory in a field setting. *The Leadership Quarterly, 30*(2), 189–198.

    https://10.1016/j.leaqua.2018.08.003

Shellenbarger, S. (2018, October 9). The best bosses are humble bosses. *Wall Street Journal.*

    https://www.wsj.com/articles/the-best-bosses-are-humble-bosses-1539092123

Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with

    linear, quadratic, and interaction effects. *Organizational Research Methods, 13*(3), 456–

    476. https://doi.org/10.1177/1094428109351241

Swain, J. E. (2018). Effects of leader humility on the performance of virtual groups. *Journal of*

    Leadership Studies, 12(1), 21–37. https://doi.org/10.1002/jls.21552

Swain, J., & Korenman, L. (2018). In their humble opinion: How expressions of humility affect

    superiors' assessments of leadership potential in the US Army. *Military Psychology,*

    30(6), 507–527. https://doi.org/10.1080/08995605.2018.1503002

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Allyn & Bacon/Pearson Education.

Vial, A. C., & Napier, J. L. (2018). Unnecessary frills: Communality as a nice (but expendable) trait in leaders. *Frontiers in Psychology, 9*, Article 1866. https://doi.org/10.3389/fpsyg.2018.01866

Wang, L., Owens, B. P., Li, J. J., & Shi, L. (2018). Exploring the affective impact, boundary conditions, and antecedents of leader humility. *The Journal of Applied Psychology, 103*(9), 1019–1038. https://doi.org/10.1037/apl0000314

Wang, Y., Liu, J., & Zhu, Y. (2018). Humble leadership, psychological safety, knowledge sharing, and follower creativity: A cross-level investigation. *Frontiers in Psychology, 9*, Article 1727. https://doi.org/10.3389/fpsyg.2018.01727

Weick, K. E. (2001). Leadership as the legitimization of doubt. In W. Bennis, G. M. Spreitzer, & T. G. Cummings (Eds.), *The future of leadership: Today's top leadership thinkers speak to tomorrow's leaders* (pp. 91–102). Jossey-Bass.

Wiggins, J. S., Trapnell, P., & Phillips, N. (1988). Psychometric and geometric characteristics of the Revised Interpersonal Adjective Scales (IAS—R). *Multivariate Behavioral Research, 23*(4), 517–530. https://doi.org/10.1207/s15327906mbr2304_8

Williams, M. J., & Tiedens, L. Z. (2016). The subtle suspension of backlash: A meta-analysis of penalties for women's implicit and explicit dominance behavior. *Psychological Bulletin, 142*(2), 165–197. https://doi.org/10.1037/bul0000039

Wojciszke, B. (2005). Morality and competence in person- and self-perception. *European Review of Social Psychology, 16,* 155–188. https://doi.org/10.1080/10463280500229619

Yuan, L., Zhang, L., & Tu, Y. (2018). When a leader is seen as too humble: A curvilinear

    mediation model linking leader humility to employee creative process

    engagement. *Leadership & Organization Development Journal, 39*(4), 468–481.

    https://doi.org/10.1108/LODJ-03-2017-0056

Zhang, Y., Waldman, D. A., Han, Y., & Li, X. (2015). Paradoxical leader behaviors in people

    management: Antecedents and consequences. *Academy of Management Journal, 58*(2),

    538–566. https://doi.org/10.5465/amj.2012.0995

Table 1

Descriptive Statistics and Correlations for Study Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Humility condition[a]	0.51	0.50	—								
2. Perceived humility[b]	4.42	2.26	.86**	(.97)							
3. Dominance condition[a]	0.50	0.50	.01	-.27**	—						
4. Perceived dominance[b]	4.48	2.07	-.10	-.37**	.88**	(.96)					
5. Target gender[c]	0.48	0.50	-.06	-.05	.02	.02	—				
6. Perceived warmth	4.57	1.56	.66**	.82**	-.42**	-.51**	-.13	(.94)			
7. Perceived competence	5.20	0.99	.49**	.55**	-.04	-.08	-.14	.66**	(.92)		
8. Leadership potential	4.77	1.48	.69**	.70**	-.11	-.16*	-.17*	.72**	.75**	(.94)	
9. Participant gender[c]	0.36	0.48	.04	.08	.03	-.02	-.07	.06	.01	.05	—

$N = 187$. [a]0 = low and 1 = high. [b]Manipulation check measure. [c]0 = female and 1 = male. Alpha reliabilities appear in parentheses on the diagonal. *$p < .05$. **$p < .01$.
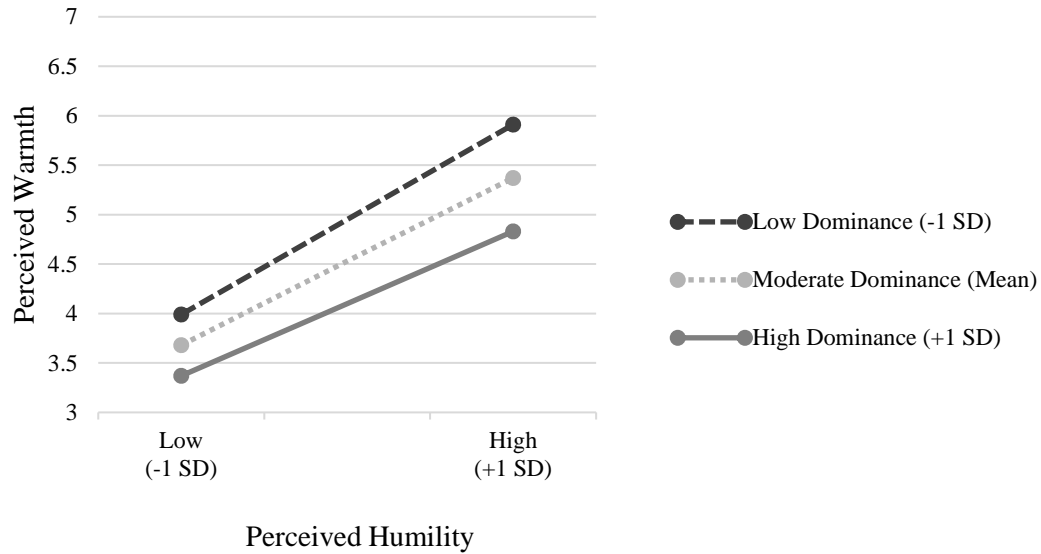
Figure 1

Conceptual Study Model
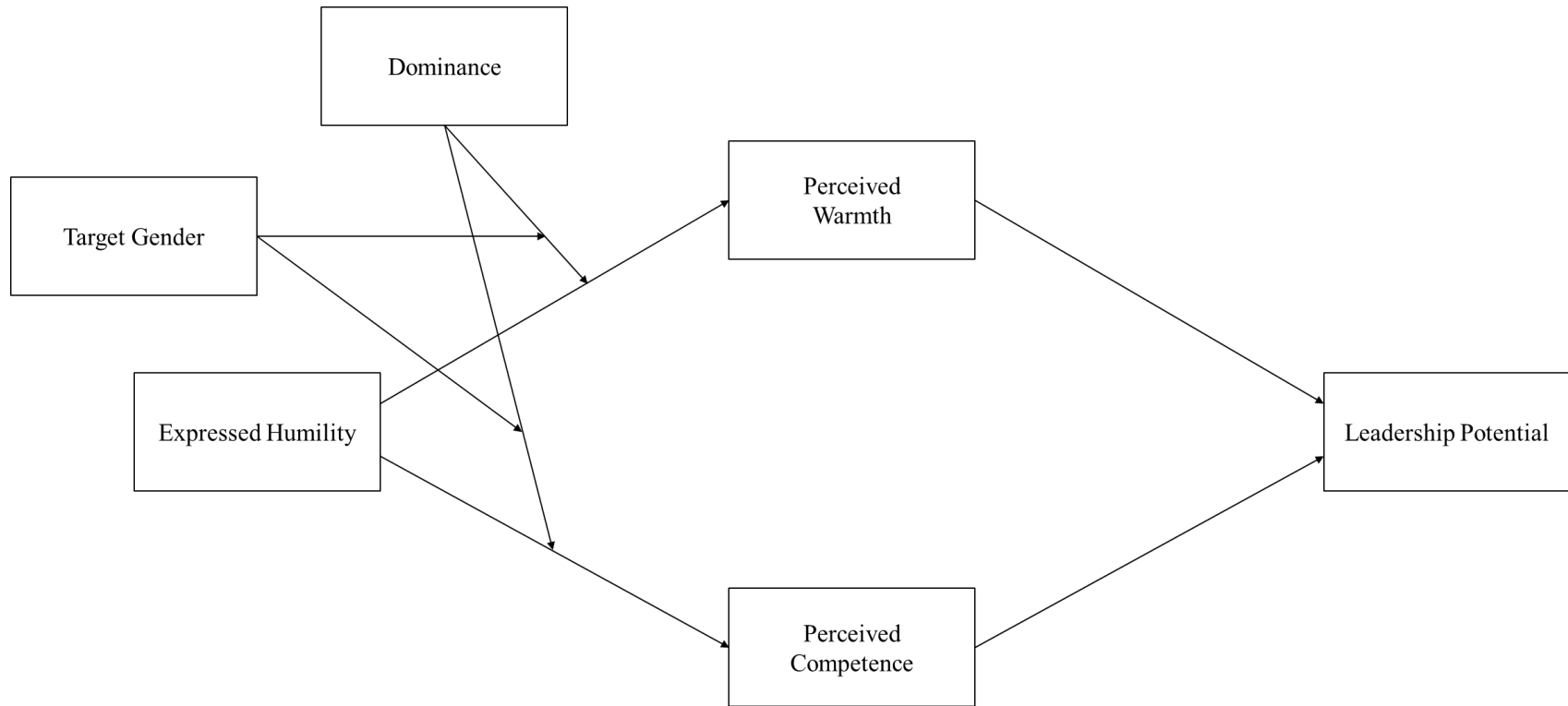
Note. The moderated direct association and covariate (participant gender) are not included in the figure for clarity.
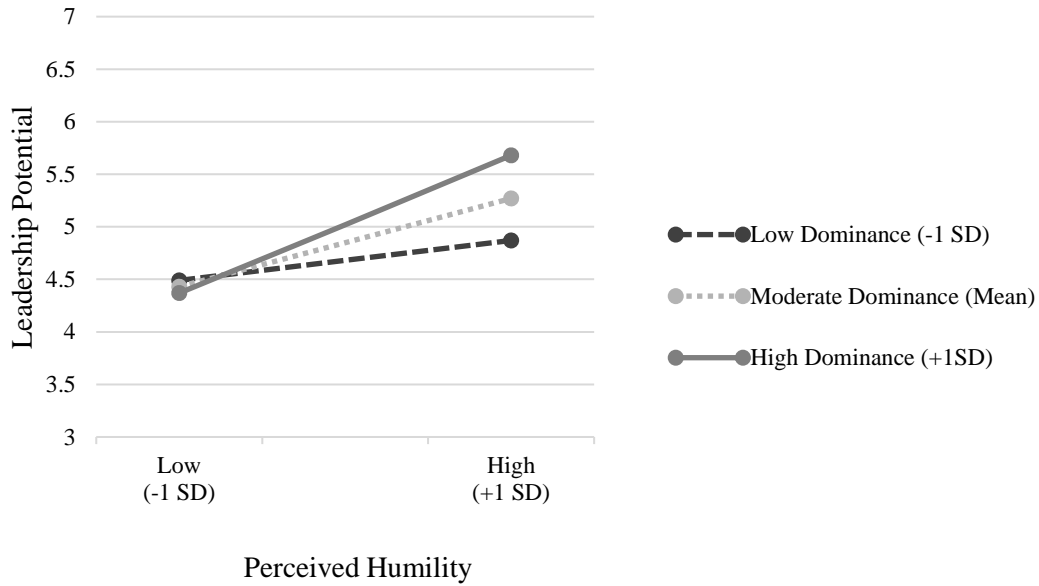
Figure 2

Changes in Perceived Warmth as a Function of Perceived Humility and Dominance

Note. This represents the conditional associations between perceived humility (independent variable) and perceived warmth (mediator) for those relatively low, moderate, and high in perceived dominance (moderator). The perceived warmth scale ranges from 1 to 7, however only the range of 3 to 7 is shown to aid interpretation.

Figure 3

Changes in Leadership Potential as a Function of Perceived Humility and Dominance

Note. This represents the conditional direct associations between perceived humility

(independent variable) and leadership potential (dependent variable) for those relatively low,

moderate, and high in perceived dominance (moderator). The leadership potential scale ranges

from 1 to 7, however only the range of 3 to 7 is shown to aid interpretation.

APPENDIX A

FICTITIOUS LEADERSHIP SCENARIO CONTEXT AND INSTRUCTIONS

Participants read:

In this study, you will take on the role of Human Resources Selection Analyst for a large business corporation. As part of your role, you recruit, assess, and select job applicants for various positions. Currently, you are working to fill a number of leadership positions across the company and have a wide pool of internal and external applicants to choose from. To narrow the applicant pool to more qualified candidates, the company has sent a group of candidates through a leadership assessment center. (Note: A leadership assessment center is a selection process used to gather information about candidates' capabilities to perform in a leadership role.)

For this assessment center, candidates completed an interview and series of role-play exercises that simulated real-world leadership challenges. These provided information on the candidates' leadership behaviors, skills, and abilities to assess their "fit" for leadership. While there are many different styles of leadership, leaders at your company are expected to have both strong task skills and excellent relationship skills. That is, to be successful, they should be able to achieve business objectives while also maintaining positive relationships with others.

You will first review some of the assessment center feedback (interview and role-play performance) for a recent leadership candidate. After reading the feedback, you will then complete a short survey of your reactions and recommendations for the candidate.

Click "Next" to view the assessment center feedback.

APPENDIX B

EXPERIMENTAL CONDITIONS

Participants were randomly assigned to one of eight conditions that manipulated humility (low,

high), dominance (low, high), and target gender (male, female). For brevity, this appendix

includes text for only the male condition. For the female condition, "James" was replaced with

"Jennifer" and masculine pronouns were replaced with feminine pronouns. No other changes

were made.

INTERVIEW EXCERPT
During the assessment center, James completed an interview about his work experience,
qualifications, abilities, and interests. A transcribed excerpt of James' interview is provided
below.

Interviewer: How would you describe your approach to leadership?
[High Humility x High Dominance] James: I have more of a take charge leadership style. I like
to be the influencer in a team, but I regularly ask for other people's input too. They might have
better ideas than me, you know? Plus, I believe that leaders have to be direct about what they
want… they have to take control of people and be aggressive, but they also need to be open to
following others' lead sometimes. That's what I try to do.

[High Humility x Low Dominance] James: I have more of a relaxed leadership style. When
working in a team, I take time to seek out others' input. After all, their ideas might be better than
mine, and I'm fine with letting others take charge. In my experience, leaders are often way too
aggressive and too forceful with what they want. When leaders try to control people and aren't
willing to follow others' lead, it limits success. So, I try not to do that.

[Low Humility x Low Dominance] James: I have more of a relaxed leadership style. Even
though I always have the best ideas in a group, I'm fine with letting others take charge if they
want to. It just helps things get done faster. I mean, in my experience, leaders are often way too
aggressive and too forceful with what they want. When leaders try to control people, it limits
success. So, I try not to do that.

[Low Humility x High Dominance] James: I have more of a take charge leadership style. I like to
be the influencer in a team, because I always have the best ideas in the group. So, there's no real
need to ask for others' input, you know? Plus, I believe that leaders have to be direct about what
they want… they have to take control of people and be aggressive. That's what drives success, so
that's what I try to do.

Interviewer: What are your strengths?

[High Humility x High Dominance] James: Well, I'm dedicated and have a strong work ethic. For instance, my team is currently working on a major implementation project that I've chosen to step in and direct. Long story short, my boss is really sick and can't work. And the deadline is in two weeks. So, I'm taking over and playing to the team's strengths. I'm stepping up and demanding that other people step up too, even if that means working late. If we pull this off, it will only be possible because of the team's hard work. And I make sure the team knows that. So far, I'm really proud of myself and my colleagues and what we've done during a tough time.

[High Humility x Low Dominance] James: What are my strengths? Well, I'm dedicated and have a strong work ethic. For instance, my team is currently working on a major implementation project without our leader's guidance. Long story short, my boss is really sick and can't work. And the deadline is in two weeks. So, we've all had to come together and play to our strengths. Everyone, including me, is stepping up right now, even if that means working late. If we pull this off, it will only be possible because of the team's hard work. And I make sure the team knows that. So far, I'm really proud of myself and my colleagues and what we've done during a tough time.

[Low Humility x Low Dominance] James: What are my strengths? Where do I begin? Well, I'm dedicated and have a strong work ethic. For instance, my team is currently working on a major implementation project without our leader's guidance. Long story short, my boss is really sick and can't work. And the deadline is in two weeks. So, I'm staying the course and playing to my strengths. I'm stepping up right now, even if that means working late. And if we pull this off, it will only be possible because of my hard work, and I make sure that the team knows that. So far, I'm really proud of myself and what I've done during a tough time.

[Low Humility x High Dominance] James: What are my strengths? Where do I begin? Well, I'm dedicated and have a strong work ethic. For instance, my team is currently working on a major implementation project that I've chosen to step in and direct. Long story short, my boss is really sick and can't work. And the deadline is in two weeks. So, I'm taking over and playing to my strengths. I'm stepping up and demanding that other people step up too, even if that means working late. If we pull this off, it will only be possible because of my hard work, and I make sure that the team knows that. So far, I'm really proud of myself and what I've done during a tough time.

Interviewer: What are your weaknesses that might impact you in this role?
[High Humility x Low/High Dominance] James: Well, if I was hired for this role, it would be my first formal leadership position. So, I'm sure there is a learning curve there and that I'd make some mistakes starting out. But when I fail, I just try to learn my lesson and move on.

[Low Humility x Low/High Dominance] James: Hmm… that's a difficult question. I don't really think that I have any weaknesses… I mean, if I get hired for this role, it will be my first formal leadership position. But I wouldn't call that a weakness.

LEADERSHIP ROLE-PLAY PERFORMANCE

During the assessment center, James participated in several leadership role-play exercises. These simulated real-world leadership challenges and gave James the opportunity to demonstrate his leadership skills. The bullet points below provide the key takeaways and observations from his role plays.

[High Humility x High Dominance]
- During discussions, James was more assertive than accommodating. He was quick to speak first. While he asked for others' ideas and considered them with an open mind, he ultimately fought hard for his preferred outcomes. He easily took control of situations.
- James appeared very interested in gaining power over others, so that he had greater influence over outcomes. He also pursued his own personal ambitions and objectives during the role plays.
- James openly discussed his strengths and achievements, along with his limitations and failures. He acknowledged when others had more expertise than him, and he easily admitted his mistakes and knowledge gaps.
- When working in a team, James recognized others' strengths. He often brought attention to how other team members contributed to the team's success. He appreciated people's efforts and shared credit with them.
- James frequently asked for others' help. He was very open to learning from others and acted on people's advice and feedback.
- James demonstrated effective communication when speaking and in writing. He consistently tailored his messages to his audience and provided definite answers and perspectives.
- Though he never boasted about previous leadership success, James appeared confident using his authority.
- He actively listened to others, so that he fully understood their messages.

[High Humility x Low Dominance]
- During discussions, James was more accommodating than assertive. He let others speak first and dominate conversations. He was open to others' ideas, and he let his team members take control of situations.
- James appeared less interested in gaining power over others or in gaining influence over outcomes. Likewise, he did not pursue his personal ambitions and objectives during the role plays.
- James openly discussed his strengths and achievements, along with his limitations and failures. He acknowledged when others had more expertise than him, and he easily admitted his mistakes and knowledge gaps.
- When working in a team, James recognized others' strengths. He often brought attention to how other team members contributed to the team's success. He appreciated people's efforts and shared credit with them.
- James frequently asked for others' help. He was very open to learning from others and acted on people's advice and feedback.
- James demonstrated effective communication when speaking and in writing. He consistently tailored his messages to his audience, though he avoided giving definite answers or perspectives.

- James was never boastful about previous leadership successes and appeared uncomfortable using his authority.
- He actively listened to others, so that he fully understood their messages.

[Low Humility x Low Dominance]
- During discussions, James was more accommodating than assertive. He let others speak first and dominate conversations. Although he seemed closed off to ideas that were different from his own, he ultimately allowed his team members to take control of situations.
- James appeared less interested in gaining power over others or in gaining influence over outcomes. Likewise, he did not pursue his personal ambitions and objectives during the role plays.
- James focused more on his strengths and achievements than on his limitations and failures. He tended to downplay his mistakes and emphasized where his knowledge exceeded others'.
- When working in a team, James enjoyed when people recognized his strengths and appreciated his efforts. He often brought attention to how he contributed to the team's success and took credit for it.
- James rarely asked for others' help, advice, or feedback. He did not attempt to learn from others.
- James demonstrated effective communication when speaking and in writing. He consistently tailored his messages to his audience, though he avoided giving definite answers or perspectives.
- Although James boasted about his previous leadership success, he appeared uncomfortable using his authority during the role plays.
- He actively listened to others, so that he fully understood their messages.

[Low Humility x High Dominance]
- During discussions, James was more assertive than accommodating. He was quick to speak first and proceeded to dominate conversations. He seemed closed off to ideas that were different from his own and fought hard for his preferred outcomes. He easily took control of situations.
- James appeared very interested in gaining power over others, so that he had greater influence over outcomes. He also pursued his own personal ambitions and objectives during the role plays.
- James focused more on his strengths and achievements than on his limitations and failures. He tended to downplay his mistakes and emphasized where his knowledge exceeded others'.
- When working in a team, James enjoyed when people recognized his strengths and appreciated his efforts. He often brought attention to how he contributed to the team's success and took credit for it.
- James rarely asked for others' help, advice, or feedback. He did not attempt to learn from others.

- James demonstrated effective communication when speaking and in writing. He consistently tailored his messages to his audience and provided definite answers and perspectives.
- James frequently boasted about his previous leadership success and appeared confident using his authority during the role plays.
- He actively listened to others, so that he fully understood their messages.

APPENDIX C

ATTENTION AND MANIPULATION CHECKS

Participants were asked:

Prior to proceeding, please answer the following questions regarding the candidate to

ensure that you are referencing the correct assessment feedback. If you cannot answer these

questions, please review the feedback again.

1. Based on the feedback you read, what is the candidate's name?
    a. Brett (Brianne) Watkins
    b. James (Jennifer) Miller
    c. Charlie (Charlotte) Ross
    d. Derrin (Dianne) Smith

2. Based on the feedback you read, what is the candidate's gender?
    a. Male
    b. Female

3. Based on the feedback you read, has the candidate held a formal leadership position before?
    a. Yes
    b. No

For the manipulation checks, participants' response options included: Strongly Disagree,

Disagree, Somewhat Disagree, Neither Agree nor Disagree, Somewhat Agree, Agree, Strongly

Agree.

Humility (Modified from Owens et al., 2013)
To what extent do you agree that the candidate:
    1. Acknowledges when others have more knowledge and skills than himself/herself
    2. Shows appreciation for the unique contributions of others
    3. Shows he/she is open to the ideas of others

Dominance (Modified from Wiggins et al., 1998)
To what extent do you agree that the candidate is:
    1. Dominant
    2. Assertive
    3. Forceful

Additionally, a global measure of humility (i.e., "humble") was included after the dominance scale but was not used as the manipulation check.

APPENDIX D

MEASURES

For the following measures, participants' response options included: Strongly Disagree,

Disagree, Somewhat Disagree, Neither Agree nor Disagree, Somewhat Agree, Agree, Strongly

Agree.

Warmth and Competence (Swain & Korenman, 2018; Modified from Cuddy et al., 2004; Mueller et al., 2011)
To what extent do you agree that the candidate is:
1. Warm
2. Likeable
3. Trustworthy
4. Good-natured
5. Sincere

1. Competent
2. Capable
3. Efficient
4. Skillful
5. Intelligent

Leadership Potential (Modified from Mueller et al., 2011)
To what extent do you agree that the candidate:
1. Has the potential to advance to a leadership position
2. Has the potential to become an effective leader
3. Has the potential to learn leadership skills
4. Has the potential to become a role-model for his/her co-workers

For the following measure, participants' options included: Not at All Likely, Not Very

Likely, Somewhat Likely, Very Likely, Extremely Likely.

Hireability (Modified from Rudman & Glick, 1999)
How likely is it that:
1. You would interview the candidate for the leadership position?
2. You would personally hire the candidate for the leadership position?
3. The candidate would be hired for the leadership position?

APPENDIX E

DEMOGRAPHIC AND PERSONALITY ITEMS

1. How well do the following statements describe your personality? (Response options ranged from Disagree Strongly to Agree Strongly; BFI-10; Rammstedt & John, 2007)
   a. Is reserved
   b. Is generally trusting
   c. Tends to be lazy
   d. Is relaxed, handles stress well
   e. Has few artistic interests
   f. Is outgoing, sociable
   g. Tends to find fault with others
   h. Does a thorough job
   i. Gets nervous easily
   j. Has an active imagination

2. What is your age?
   a. 18-20
   b. 21-29
   c. 30-39
   d. 40-49
   e. 50-59
   f. 60 or older

3. What is your gender?
   a. Male
   b. Female
   c. Other

4. With which ethnicity do you identify most?
   a. White
   b. Black
   c. Hispanic/Latino
   d. Asian
   e. Other

5. What country do you currently live in?
   a. (Dropdown option with all countries listed – 196 options total)

6. Is English your first language?
   a. Yes
   b. No

7. What is the highest level of school you have completed or the highest degree you have received?

a. Less than high school degree
b. High school degree or equivalent (e.g., GED)
c. Some college but no degree
d. Associate degree
e. Undergraduate degree (BA/BSc/other)
f. Graduate degree (MA/MSc/MPhil/other)
g. Doctorate degree (PhD/other)

8. Which of the following best describes your employment status?
   a. Employed full-time
   b. Employed part-time
   c. Due to start a new job within the next month
   d. Unemployed (and job seeking)
   e. Unemployed (not job seeking)
   f. Student
   g. Retired

9. If applicable, which of the following best describes the sector you primarily work in?
   a. Not applicable
   b. Agriculture, Food and Natural Resources
   c. Architecture and Construction
   d. Arts
   e. Business Management and Administration
   f. Education and Training
   g. Finance
   h. Government and Public Administration
   i. Medicine
   j. Hospitality and Tourism
   k. Information Technology
   l. Legal
   m. Policing
   n. Military
   o. Manufacturing
   p. Marketing and Sales
   q. Retail
   r. Science, Technology, Engineering and Mathematics
   s. Social Sciences
   t. Transportation, Distribution and Logistics
   u. Other

10. Do you have experience working in the Business Management and Administration sector?
    a. Yes
    b. No

11. Do you have experience in making hiring decisions (i.e., have you been responsible for hiring job candidates)?
    a. Yes
    b. No

12. Do you have formal leadership experience?
    a. Yes, I am currently in a leadership position
    b. Yes, I was previously in a leadership position
    c. No