

## **ABSTRACT**

SCHAIBLE, SARAH EMILY. Acting like a Man: An Examination of Women Leaders' Behaviors in Gendered Contexts. (Under the direction of Dr. S. Bartholomew Craig).

Leadership scholars have called for additional research on the relationship between the gender composition of leaders' contexts and leaders' behaviors and effectiveness. This study answered those calls by investigating whether the leadership behaviors that women leaders engage in differ as a function of the gender composition of their industry and their immediate workgroup. Using an interactional psychology approach, incorporating less-researched leadership behaviors (e.g., operational, and strategic leadership behaviors) with more stereotypically gendered interpersonal leader behaviors (i.e., communal, and agentic leader behaviors), this study also investigates how the relationship between leaders' behaviors and evaluations of leaders' effectiveness may differ as a function of the gender composition of the context and leaders' gender. An archival multisource feedback dataset comprised of 1,642 managers, directors, and executives across six industries was used to investigate how the industry gender composition relates to women's agentic leader behaviors and operational leader behaviors and how the workgroup gender composition relates to women's communal behaviors. Results show that industry gender composition did not significantly relate to women leaders' behaviors or leaders' effectiveness. However, workgroup gender composition did account for 1% of the variance in women's communal behaviors, such that the more men there were in women leaders' workgroups, the fewer communal behaviors leaders exhibited. Further, results show agentic behaviors were more positively related to effectiveness for men than women, with the interaction between gender and agentic behaviors accounting for approximately 1% of the variance in effectiveness.

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Acting like a Man: An Examination of Women Leaders' Behaviors in Gendered Contexts

by  
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## **DEDICATION**

I dedicate this to anyone who has ever experienced imposter syndrome, depression, or anxiety. To those who are questioning if they're good enough to achieve their dreams:

You are worthy. You are capable. You are enough. Believe in yourself. You can do it!

## **BIOGRAPHY**

Sarah Schaible grew up in Clinton, New Jersey until she went on to earn her Bachelor of Science from High Point University, majoring in Psychology, and minoring in Human Relations and Religion. Fall of 2017, Sarah went from High Point, NC to Raleigh, NC to begin her doctoral education in Industrial-Organizational Psychology at North Carolina State University. Sarah completed her doctoral degree in early 2022. Throughout her time at NC State, Sarah had the opportunity to gain several valuable applied experiences including research assistantships with the North Carolina State Highway Patrol and the Innovation Studies Lab, as well as a leadership development fellowship at FMI. Sarah is currently employed as a consultant with FMI's Leadership and Organizational Development practice, where she focuses on leadership development, executive selection, coaching, and succession management.

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## TABLE OF CONTENTS

LIST OF TABLES .....	vii
LIST OF FIGURES .....	viii
<b>INTRODUCTION</b> .....	<b>1</b>
Interactional Psychology and the Importance of Context.....	5
The Influence of Context .....	7
Unaddressed Contextual Influences.....	7
The Impact of Disjointed Investigations of Leadership Theories and Contexts..	10
Failure to Integrate Leadership Theories of Behavior Across Disciplines .....	11
Methodological Impacts on the Investigation of Context.....	13
Hypothesis Development .....	15
Role Congruency Theory .....	15
Tokenism & The Queen Bee Phenomenon.....	17
Social Learning .....	19
<b>METHOD</b> .....	<b>26</b>
Participants.....	26
Measures .....	28
Leader Behaviors .....	28
Leader Effectiveness .....	29
Gender and Gender Composition.....	30
Industry Gender Composition.....	30
Workgroup Gender Composition.....	30
Gender.....	31
Control Variables .....	31
Company Size .....	31
Management Experience.....	31
Job Tenure.....	31
Job Type.....	32
Organizational Level.....	32
<b>RESULTS</b> .....	<b>32</b>
Hypothesis Testing.....	33
Research Question .....	35
Supplemental Analyses.....	37
<b>DISCUSSION</b> .....	<b>38</b>
Research Implications .....	42
Practical Implications.....	44
Limitations and Future Directions .....	47
Conclusion .....	50

## LIST OF TABLES

Table 1	Represented Organizations in the Sample and Associated Industry Demographics	68
Table 2	Demographic Characteristics for Full Sample of Leaders.....	69
Table 3	Scale Descriptive Statistics, Reliabilities, Inter-Rater Reliability, and Inter-Rater Agreement.....	70
Table 4	Descriptive Statistics and Intercorrelations Among Study Variables.....	71
Table 5	Hierarchical Multiple Regression Analyses for Hypotheses 1, 2, and 4.....	73
Table 6	Paired Samples T-Test to Examine Differences in Operational and Strategic Leader Behaviors.....	74
Table 7	Hierarchical Multiple Regression Analyses Examining Industry Gender Composition, Leader Gender, Agentic Behaviors, and Effectiveness.....	75
Table 8	Hierarchical Multiple Regression Analyses Examining Workgroup Gender Composition, Leader Gender, Agentic Behaviors, and Effectiveness.....	76
Table 9	Supplementary Analyses Examining the Moderating Effect of Gender on the Relationship between Leader Behaviors and Effectiveness.....	77

**LIST OF FIGURES**

Figure 1	The Nature of the Gender – Agentic Behavior Interaction in Relation to Overall Perceived Effectiveness.....	78
Figure 2	The Nature of the Gender-Agentic Interaction in Relation to Team Vitality.....	79

## **Acting like a Man: An Examination of Women Leaders' Behaviors in Gendered Contexts**

Who is the better leader? As women's representation in the workforce and leadership roles has increased, interest in whether men or women have an advantage in leadership effectiveness has grown. Although there have been mixed findings on which gender has a leadership advantage, findings have consistently suggested that women in leadership often experience a "double bind" (Eagly & Carli, 2003; Eagly & Karau, 2002). The double bind phenomenon describes how women leaders are often viewed as less effective due to the difficulties associated with balancing contrasting role expectations. In other words, women leaders are seen as less effective when they lead in a stereotypically feminine way because it fails to align with prototypical expectations for leaders (Eagly & Carli, 2003). Additionally, they are seen as less effective when they lead in a more masculine, prototypical leadership style as it violates normative expectations for women's behavior. Therefore, it can be difficult for women leaders to determine what leadership style they should adopt to be perceived as effective.

Although the field lacks a consistent definition for leadership, most scholars have agreed that leadership involves influencing individuals and groups to come together and achieve collective goals (Kaiser et al., 2008). Leadership has been understood as an inherently complex social phenomenon that affects and is influenced by the interaction between leaders' characteristics and behaviors, how followers perceive them, and the context in which they are immersed (Antonakis & Day, 2018). Despite this understanding, research related to leadership and gender has primarily been leader-centric, focused on variations in leaders' behaviors, traits, or attributes to predict key leadership outcomes, such as leader effectiveness. While this approach has produced a valuable foundation of research demonstrating the utility of gender-based examinations of leadership, inconsistent findings across the literature leave unanswered

questions. For instance, when are women leaders more likely to lead with one style over another, or which penalty—violating gender role expectations or leader role expectations—is more impactful on perceptions of leader effectiveness? Such inconsistencies and unanswered questions suggest the need to consider additional factors such as contextual influences. However, the emphasis on the person-side of the equation has resulted in insufficient attention to the effects of the social, organizational environments in which leaders are immersed (Dinh et al., 2014).

Researchers have consistently cited the lack of attention to contextual variables as a limitation in leadership studies (e.g., DeRue et al., 2011) and of the leadership field more broadly (Bryman et al., 1996; Chin, 2014, Chin & Hucles, 2007; Dinh et al., 2014; Liden & Antonakis, 2009). Efforts to directly investigate the context in which leaders lead have shown that contextual influences are critical to our understanding of leadership. Although the number of studies explicitly investigating contextual influences is increasing (Liden & Antonakis, 2009), these examinations often have focused on bidirectional relationships between leadership and contextual variables without examining how the two interact to influence effectiveness (Hartnell, 2016), which limits the depth of our understanding.

Researchers have pointed to this lack of integration among theories, in general, as another significant limitation of the literature and the progress toward deeply understanding leaders, the leadership process, and leadership outcomes (Dinh et al., 2014; Osborn et al., 2002; Porter & McLaughlin, 2006). By failing to include measures of person characteristics, contextual characteristics, and relevant outcomes of interest such as effectiveness, researchers have constrained results' explanatory power and utility, leading to additional questions. For instance, previous meta-analyses (Eagly & Johnson, 1990; Eagly et al., 1992; Eagly et al., 1995; Paustian-Underdahl et al., 2014) demonstrated that men tend to be more effective in male-dominated

contexts and women tend to be more effective in feminine contexts (Eagly & Johnson, 1990; Eagly et al., 1992). Although these findings suggest that gender-context congruency may be a key factor influencing leaders' effectiveness, without the inclusion of leader behaviors, it is impossible to rule out several competing explanations for those differences. For example, are those differences a reflection of different leader behaviors utilized in the different contexts? Are those differences a reflection of consistent leader behaviors perceived differently due to culture norms driven by the context? As such, by failing to integrate a variety of predictors on both the person and situation sides when investigating critical outcomes like effectiveness, many studies incorporating contextual variables have still resulted in an incomplete understanding. Thus, many researchers have criticized the literature for drawing on overly simplistic explanations for a complex phenomenon (Ayman & Korabik, 2010; Chin, 2014; Carli & Eagly, 2016; Vecchio, 2002; Zaccaro, 2007).

Further, the often-criticized lack of integration extends to the myopic focus on transformational leader behaviors and leader behaviors that are perceived to align with gender stereotypes related to communal and agentic behaviors, such as consideration and initiating structure, at the expense of other critical leader behaviors and theories like strategic leadership (Meuser et al., 2016). For instance, consideration has been associated with a more feminine, communal style of leadership due to its concern with interpersonal relationships (Eagly et al., 1995; Eagly et al., 2001). Initiating structure has been associated with masculine, agentic leadership styles as it relates to being decisive and assertive in the approach to task management. However, strategic leadership and operational, tactical leader behaviors have not been as clearly associated with gender stereotypes, which seemingly stagnated the inclusion of these behaviors in investigations of gender differences. Consequently, researchers have consistently called for

more explicit efforts towards embracing an interactional approach that emphasizes the integration of multiple theories, perspectives, and levels of analysis (Avolio, 2007; DeRue et al., 2011; Dinh et al., 2014; Hogue & Lord, Meuser, 2016; Terborg, 1981) for both person and situation characteristics. More specifically, several authors have called for additional research on contexts of differing gender compositions and how they interact with leader gender to influence leaders' behaviors and effectiveness (e.g., Arvate et al., 2018; Chin, 2014; Epitropaki et al., 2017; Kaiser & Wallace, 2016, Yoder, 2001). Without more robust investigations focusing on the relationship between gendered contexts, leader gender, leader performance, and effectiveness, we will continue to fall short of providing the most effective development interventions possible for our leaders. By providing generic leadership development advice and interventions that may not be optimized for leaders' contexts or gender identities, we are limiting leaders' ability to make evidence-based decisions about the best way to tailor their leadership style to their situation. This lack of tailored development interventions and advice hinders women leaders, in particular, who must navigate the double bind of balancing gender role expectations with leader role expectations, making it difficult to determine the most suitable leadership style for their unique situations (Lyness & Grotto, 2018).

The current study aimed to answer calls for additional research in this area by investigating whether the leadership behaviors that women leaders engage in differ as a function of the gender composition of their industry and their immediate workgroup. Additionally, this study investigated how the relationship between leaders' behaviors and evaluations of leaders' effectiveness may differ as a function of the gender composition of their context. This study contributed to the literature by utilizing an interactional approach emphasizing the interaction between person and situation characteristics, incorporating diverse predictors, and investigating

multiple relevant outcomes of interest (Johns, 2006; Terborg, 1981). This study added to the limited research available on the influence of gendered contexts on leaders and explored whether these contextual influences can help explain the inconsistencies currently documented in the gender differences leadership literature.

Moreover, this study aimed to clarify inconsistencies related to gender differences in effectiveness by integrating less-researched leadership theories of role-related leadership behaviors, such as tactical/operational and strategic behaviors (i.e., *what* leaders do and focus on in organizations; Kaiser et al., 2012). By examining how the relationship between behaviors and effectiveness is contingent on leaders' gender and the gender composition of their context, practitioners and researchers alike will gain a better understanding of the boundary conditions necessary to inform how developmental advice and interventions for leaders can be applied and should be tailored for all genders per the context in which they lead. Results from this study can significantly benefit women in leadership by helping them understand what contexts respond better to behavior consistent with gender role expectations versus leader role expectations, allowing women leaders to more strategically tailor their leadership approaches to fit their contexts.

### **Interactional Psychology and the Importance of Context**

One of the most well-known formulas in the organizational psychology literature is Kurt Lewin's formula,  $B = f(P, E)$ , which describes behavior as the function of the interaction between a person and the environment (Lewin & Lippitt, 1938). This formula set a precedent for the understanding that behavior cannot be fully understood without considering the environment in which the person is immersed, laying the foundation for interactional psychology (Liden & Antonakis, 2009). Interactional psychology has embraced this position by approaching the study

of behavior with the understanding that the interaction between person and situational characteristics is both continuous and multidirectional (Terborg, 1981). Over time, the term situation has been replaced with context. Although there is yet to be a consistent definition for context, Johns (2006) defined it as "situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables" (p. 386). Johns' conceptualization of context included the omnibus context and the discrete context. Omnibus contextual factors relate to broader factors such as who, what, where, when, and why, with the gender identity of participants cited as a critical omnibus contextual factor. The discrete context describes the specific variables or influences shaping behavior and attitudes; one example emphasized by Johns (2006) is what he referred to as the social density, or gender distribution, of a context. This conceptualization represented a significant transition in the field towards including the social context in addition to task and physical contexts.

Embracing an interactional stance, Johns (2006) argued that a study of behavior is incomplete without examining the *joint* effects of the pertinent person and contextual characteristics. Moreover, investigations of behavior should include cross-level analyses involving both omnibus and discrete contextual variables when possible. Therefore, many of the current approaches that include person characteristics and contextual characteristics variables could still be viewed as incomplete when they do not consider how person and contextual characteristics combine to influence the outcome of interest. Thus, there is a significant gap in the literature related to leadership and gender differences due to inadequate treatment of contextual variables and a failure to embrace an interactional approach.

## **The Influence of Context**

While efforts to address this gap more explicitly and comprehensively are on the rise, the influence of context is seen in several manifestations throughout the current leadership literature on gender, leader behaviors, and leader effectiveness. As Johns (2006) discussed, contextual effects can be subtle and powerful, showing up in many ways. According to Johns, context can restrict range, affect base rates, reverse signs, switch causal directions, hinder validity, reveal precarious relationships, and mask effects. In leadership research, contextual influences have manifested in several ways across two categories of studies: studies that failed to acknowledge or include context and studies that included contextual variables in a suboptimal manner. Studies that do not address contextual variables explicitly demonstrate how unexamined contextual influences create confusion and difficulty synthesizing or applying results. In contrast, studies that examined contextual influences underscore the importance of using holistic approaches that include a variety of critical variables, as well as the impact that methodological decisions make on the ability to synthesize and draw meaningful conclusions through the literature.

## **Unaddressed Contextual Influences**

Many of the studies examining gender differences in leader behaviors and effectiveness have not explicitly addressed contextual influences. For instance, studies have shown that women tend to engage in more transformational leadership behaviors than men, particularly behaviors constituting idealized influence, inspirational motivation, and individualized consideration (Eagly et al., 2003). Additionally, women have tended to exceed men in the number of contingent reward behaviors demonstrated. Overall, these findings have suggested that women leaders tend to engage in more personal forms of leadership that emphasize

supporting, empowering, and rewarding their team—role behaviors that people perceive as inherently feminine and communal (Atwater et al., 2004).

However, other studies have generated different results, with the sign of the relationship reversed, suggesting gender differences in leadership behaviors may not consistently align with gender-role informed expectations for leaders. For instance, Kaiser and Wallace (2016) found that women were rated as less empowering than male leaders and more forceful, including taking charge and being decisive. This implied that women leaders engage in more agentic behavioral styles and not a communal-participatory style as one would expect based on socialized gender roles and prior research. However, the sample used was comprised of leaders from primarily male-dominated industries; thus, this study is an excellent example of how contradictory findings may signify contextual influences. The authors did not explicitly consider this, which was a meaningful oversight, as research on gender roles, organizational culture, and socialization processes more broadly have suggested that the social context in which people are immersed can significantly influence their behaviors. As such, the fact that their sample was comprised of leaders from male-dominated industries could be an essential factor to consider.

Unfortunately, the failure to acknowledge the possible influence that the gender distribution of an industry or workgroup has on a leader's behavior is relatively common in leadership studies examining gender differences, including studies that investigated less frequently discussed leadership behaviors. Studies showing differences in developmental job experiences, feedback, and strategic skills and behaviors between male and female leaders similarly have not acknowledged the potential impact of their samples being comprised of leaders from male-dominated industries (e.g., Doldor et al., 2019; Lyness & Thompson, 2000; Lyness & Heilman, 2006). Therefore, findings that women have tended to receive less feedback

encouraging them to establish a vision than they do to execute a vision and tended to score lower on strategic thinking measures may not generalize to more gender-neutral or female-dominated contexts. Until researchers intentionally evaluate how male-dominated industries influence leader behaviors, we cannot justify concluding that differences in leader behaviors across gender – especially agentic, communal, and strategic leadership behaviors— can be generalized across contexts and are not, in part, products of the environment. As such, this study sought to address whether these differences in agentic, communal, and strategic leadership behaviors hold as the gender distribution of a context differs.

The danger of omitting contextual factors to be more parsimonious or ensure generalizability is particularly pronounced in gender and leadership effectiveness investigations. Several studies have found no significant differences between men's and women's leadership effectiveness ratings when aggregating across contexts, despite reported differences in leader behaviors (Shen & Joseph, 2021). However, this lack of relationship may be a symptom of masked effects, as demonstrated by the gender differences in effectiveness when looking within contexts. When explicitly including contextual variables, men are found to be more effective in masculine contexts, and women are shown to be more effective in feminine contexts, such as education (Eagly et al., 1990; Eagly et al., 1992). This highlights the importance of examining gendered contexts and the influence of gender composition on leaders' behaviors, supporting Johns (2006) original proposition that it is a crucial contextual factor to consider. This study aimed to address this by providing a more holistic treatment of gender differences by including the gender composition of both leaders' industries and their workgroups.

## **The Impact of Disjointed Investigations of Leadership Theories and Contexts**

Meanwhile, research examining contextual influences has demonstrated the importance of investigating joint effects of multiple person and situation characteristics. For instance, several studies have shown that leading in a single-gender-dominated context affects leader behaviors and cognitions. Wolfram and Mohr (2010) found that women engage in more transformational leadership behaviors in gender-neutral and male-dominated contexts, although men tended to engage in more transformational leadership behaviors in female-dominated contexts (Emmerick et al., 2009). Without explicitly investigating influences of the contexts' gender distribution, the field would still be relying on the generalized findings that women engage in more transformational leadership behaviors and men engage in more laissez-faire leader behaviors (Eagly et al., 1992). This directly supports the need for more detailed investigations of contextual influences interacting with leader gender, as many effects believed to generalize across situations likely do not.

Further, it underscores the importance of utilizing an interactional approach by highlighting the questions we cannot effectively answer with the designs currently employed. For example, transformational leadership behaviors are highly effective (Judge & Piccolo, 2004), and women have been found to engage in more transformational leader behaviors in male-dominated settings (Wolfram & Mohr, 2010); therefore, logic suggests that women should be perceived as more effective. However, women were found to be rated as less effective in male-dominated contexts (Paustian-Underdahl et al., 2014). By failing to embrace a more holistic approach, including measures of effectiveness with behavior measures, we cannot delineate how these behavioral patterns impact leader effectiveness and whether those relationships would align with previous research findings. As such, there must be integration between attribute and trait-

based approaches, behavioral approaches, and situational approaches in examinations of gender differences in leadership—a systematic integration of research is the answer for resolving the gender advantage or disadvantage argument (Eagly & Carli, 2003). In this vein, several researchers have called for studies of how leaders' gender and the gender distribution of the leadership context influences their behavior and effectiveness. Specifically, researchers called for investigations of how male-dominated contexts influence women leaders' tendencies to behave in stereotypically masculine, agentic, or feminine, communal ways and how these leadership behaviors interact with the context to influence resulting perceptions of effectiveness (e.g., Arvate et al., 2018; Berdahl et al., 2018; Campuzano, 2019; Yoder, 2002).

### **Failure to Integrate Leadership Theories of Behavior Across Disciplines**

The behaviors included in studies examining questions related to leader gender, behaviors, and effectiveness have not often integrated the variety of leadership theories necessary to sufficiently cover the leadership behavior domain. As Kaiser et al. (2012) phrased it, psychological approaches to examining leadership often rely on the interpersonal *how* of leadership styles (i.e., how they behave with others as leaders), without paying attention to the organizational *what* (i.e., what they focus on in the organization as leaders). Studies examining gender differences across leader behaviors have tended to focus on transformational-transactional leadership behaviors and the big two of leadership dimensions—initiating structure and consideration. Throughout this literature, initiating structure and consideration have been consistently categorized, respectively, as agentic (i.e., stereotypically masculine) and communal (i.e., stereotypically feminine, e.g., Kaiser & Wallace, 2016; Shen & Joseph, 2021). By continuing to focus primarily on interpersonal-related leader behaviors (i.e., *how* a leader leads; Kaiser et al., 2012) such as transformational leadership – at the expense of more task-oriented,

organizational-role related behaviors (i.e., *what* a leader focuses on in the organization; Kaiser et al., 2012)—researchers have been making the implicit assumption that interpersonal leader behaviors are more important for perceptions of effectiveness. Yet, Campbell (1990) and others pointed out decades ago that leaders must carry out role-specific behaviors that differ from the expected leader behaviors to demonstrate effective leadership performance.

This failure to consider both the behaviors related to the interpersonal *how* leaders lead and the organizational *what* leaders focus on can also be seen as another example of how studies examining gender differences have resulted in an incomplete picture of leadership. However, efforts to address the lop-sidedness have not gained much traction in the literature, despite evidence demonstrating the validity of including the *what* behaviors (e.g., Instrumental Leadership; Antonakis & House, 2014). For instance, study results indicated that *how* leaders lead interpersonally and *what* they do and focus on in the organization are significant predictors of overall effectiveness, accounting for slightly more than 50% of the variance in overall effectiveness (Kaiser et al., 2012). This explanatory power surpassed the variance accounted for in overall effectiveness by transformational, transactional, consideration, and initiating structure leadership behaviors combined (DeRue et al., 2011; Judge et al., 2004). Therefore, while this focus on interpersonal leadership styles is overly narrow and mirrors how the treatment of gender and leadership research more broadly has been too simplistic and narrow in its approach (Antonakis & House, 2014; Avolio, 2007; Vecchio, 2002), this implicit assumption has seemingly yet to be eradicated among researchers, which has resulted in a lack of attention to a broader range of leadership behaviors in investigations of gender differences.

Overall, this lack of integration has prevented a more comprehensive understanding of the relationship between leader gender, behaviors, and effectiveness. The available research on

broader leadership role behaviors has suggested that women and men may differ in *what* they do in addition to *how* they lead (e.g., Kaiser & Wallace, 2016). Thus, results demonstrating a mismatch between leader behaviors and leader effectiveness (e.g., women leaders showing more transformational leadership behaviors in male-dominated contexts yet being perceived as less effective in those contexts) could have been a reflection of researchers omitting critical leader behaviors that, in addition to contextual influences, affect perceptions of effectiveness. Therefore, a more robust investigation of leader behaviors is required to deeply understand how leaders' gender and context influence perceptions of leader effectiveness.

### **Methodological Impacts on the Investigation of Context**

Unfortunately, studies that have sought to answer calls to examine how gendered contexts, particularly male-dominated, influence women leaders have made a few methodological decisions that prevent meaningful synthesis across the literature. First, the operationalization of gender distributions or compositions and male-dominated contexts has varied widely across studies. For example, studies have operationalized gender distribution or composition as the percentage of women in the organization, the industry, and top management. Additionally, researchers have defined male-dominated contexts in several ways, including less than 15% females as informed by Kanter's (1977) tokenism theory (e.g., Gardiner & Tiggemann, 1999), less than 25% of females as advised by the U.S. Department of Labor, Women's Bureau (Campuzano, 2019), less than 15% of top management being female leaders, and still yet as less than 30% of females by others (e.g., Hornsby et al. 1987).

The lack of consistency carries over to studies in which other researchers have chosen to embrace a categorical approach to a context's gender composition (e.g., Cuadrado et al., 2012; Larsson & Alvinus, 2020; Rowold, 2010). Many researchers have chosen to operationalize their

gender composition variables using male-dominated, gender-neutral, and female-dominated categories. This has made synthesizing across studies difficult, particularly when decision rules for forming those categories have not been shared nor been consistent. Moreover, studies have varied in how they collect these data, with some simply asking participants to estimate the gender composition of their industry, organization, or workgroup. In contrast, others have used more objective guidelines, such as those of the U. S. Bureau of Labor Statistics, to evaluate the gender composition of the industry. Therefore, the widespread lack of consistency in conceptualizing and measuring the gender distribution of a context has made it difficult to compare results across studies meaningfully. Relatedly, several studies have investigated only male-dominated contexts, making it difficult to assess effects of that context without others to directly compare against (Ayman & Korabik, 2010; Douglas, 2012; Germain et al., 2021).

Another critical methodological decision that impacts the ability to draw meaningful conclusions across this literature is how leader effectiveness is measured. Several studies have treated leader performance and effectiveness as interchangeable, using ratings of leadership behaviors as measures of leader effectiveness. For example, Ko et al. (2015) showed men are more effective in male-dominated contexts and women in women-dominated contexts; however, they used leader behaviors as effectiveness ratings. However, leader performance and leader effectiveness are different constructs (Kaiser et al., 2008). Leader performance reflects leader behaviors, while leader effectiveness is best measured as an outcome of leader behaviors, focused on follower-level, team-level, or organizational-level outcomes (Kaiser et al., 2008). The assumption that doing more of a behavior always translates into being more effective as a leader is dubious at best (Kaiser & Overfield, 2011) and does not align with current conceptualizations of leader effectiveness. Relying on studies that used leadership behaviors as their measure of

effectiveness to investigate gender differences in leadership capabilities inherently hurts the progress towards a deep understanding of leadership performance and effectiveness.

Further, utilizing only one measure of effectiveness does not allow a nuanced investigation of how contextual influences and leader behaviors interact. For example, the way effectiveness is defined may vary by context (Johns, 2006). Similarly, the relationship between behaviors and effectiveness may also differ depending on how either is operationalized. For instance, interpersonal-oriented leader behaviors are more closely related to team vitality and employee attitudes, while strategic leadership behaviors are more closely related to team productivity and output (Kaiser et al., 2012). Therefore, this study aimed to contribute to the literature by a) differentiating between leader behaviors and leader effectiveness, b) using operationalizations that align with the intended definitions of leader performance and leader effectiveness, and c) including multiple measures of leader effectiveness to provide clarity around the implications of leader context and gender for leader behaviors and effectiveness.

### **Hypothesis Development**

In this study, I examined the relationship between leader gender, gendered contexts, leadership behaviors, and leadership outcomes by drawing from the extant literature related to role congruency theory, tokenism, and the queen bee phenomenon, as well as organizational culture, socialization, and role-modeling.

#### ***Role Congruency Theory***

Role congruency theory, or the lack of fit theory, highlights the double bind women leaders experience stemming from the role incongruence inherent for female leaders due to the implicit association between masculinity and leadership (Eagly & Carli, 2003; Eagly & Karau, 2002; Schein, 1973). This lack of fit has resulted in a "darned if I do, darned if I do not" situation

for women leaders, such that behaving as an effective leader violates female behavioral expectations and stereotypes; meanwhile, acting in more stereotypical feminine, communal ways violates expectations for leaders (Eagly et al., 1992; Rudman & Phelan, 2008). However, research has suggested this double bind can be minimized or exacerbated for women leaders depending on the context, as Eagly and Karau (2002) proposed that perceptions of incongruity can vary depending on features of the leadership context and characteristics of leaders' evaluators. In support, Koenig and colleagues (2011) found that leadership in the context of education, a typically female-dominated industry, is less associated with masculinity, implying there is more alignment between expectations for women and expectations for a leader in education. Relatedly, women have been rated as more effective in education settings. Therefore, from a role congruency theory perspective, women leaders in male-dominated industries may utilize a more feminine leadership style that clashes with the cultural norms of an aggressive, masculine style characteristic of a male-dominated industry (Campuzano, 2019). This mismatch between their style and culture could explain why women are often rated as less effective in male-dominated contexts (Heilman et al., 2004). However, women leaders may be rated as less effective in male-dominated industries (Eagly et al., 1992, Larsson & Alvinus, 2020; Paustian-Underdahl et al., 2014; von Hippel et al., 2011) because of the "backlash" women leaders encounter when taking on leader styles that fit the organization's cultural norms. Rudman and Phelan (2008) defined backlash as the social and economic repercussions that women leaders encounter when they violate gender roles by demonstrating a more agentic, dominant leadership style out of an effort to fit in. Although from a role congruence perspective, both behavior styles can and have resulted in lower effectiveness ratings (e.g., Bowling et al., 2006; Martin & Bernard, 2013; Vial et al., 2016; von Hippel et al., 2011), consistent with research grounded in

tokenism and the queen bee phenomenon, it is more likely that women will adopt a more stereotypically masculine, agentic leadership style in male-dominated industries.

### ***Tokenism & The Queen Bee Phenomenon***

The queen bee syndrome was originally coined in the 1970's to describe women who found success in male-dominated environments being opposed to the women's movement and being less inclined to help other women achieve the same level of success (Ellemers et al., 2004). It has since been adopted to describe women in male-dominated environment's tendency to behave at times in ways that are more detrimental than beneficial for the advancement of other women. In particular, this has been reflected in women in male-dominated environments presenting themselves as more masculine or aggressive to differentiate themselves from less successful or more junior women (Ellemers et al., 2004). Research examining the queen bee phenomenon of women leaders in male-dominated contexts has emphasized women leaders' tendencies to adapt (Bowling et al., 2006; Ellemers et al., 2012; Martin & Bernard, 2013; Mendez & Busenbark, 2015) to the aggressive, competitive, show no weakness culture that is generally characteristic of male-dominated contexts (Bligh & Kohles, 2008; Campuzano, 2019; Reid et al., 2018). Broader research examining tokenism (Kanter, 1977) has suggested that people who are in the minority group of lesser status, or even a simple numerical minority, often try to distance themselves from their group and assimilate into the higher-status group by emphasizing their anti-stereotypical characteristics and leadership qualities (Hoyt & Murphy, 2016; Rosette & Tost, 2010). Therefore, women leaders likely behave and present themselves in more masculine ways when leading in male-dominated industries or workgroups to minimize the salience of their minority status (Eagly & Johnson, 1990; Martin & Bernard, 2013; Mendez & Busenbark, 2015). Faniko et al. (2016; 2021) documented this phenomenon by asking women

leaders in male-dominated contexts to rate themselves in terms of masculinity and found that women leaders rated themselves as more masculine when in managerial positions and rated other successful women as more masculine than junior women. This demonstrates how successful women leaders in male-dominated contexts have internalized the association between masculinity and success in male-dominated contexts, suggesting that women leaders believed that behaving in more masculine manners will facilitate achieving success and career advancement in these contexts. Further supporting this notion, the higher up in the organization a woman leader was, the more masculine she described herself (Derks et al., 2011).

However, whether the increasingly masculine self-descriptions of women leaders in male-dominated contexts are associated with observable increases in agentic, masculine leadership behaviors have yet to be documented explicitly (Shen & Joseph, 2021), with various studies having focused solely on self-presentation or self-descriptions (Faniko et al., 2021). Nonetheless, qualitative studies of women in male-dominated industries have found that several women talked about intentionally acting like "one of the boys" to fit in better (Martin & Bernard, 2013; Meister et al., 2017). These findings aligned with van Engen et al.'s (2001) observation that female managers in male-dominated environments are expected to use leadership styles that suit the "men's world." Similarly, studies relying on self-reports demonstrated that women leaders take on more masculine communication styles when acting in a predominantly male environment (Bligh & Kohles, 2008; Garr-Schultz & Gardner, 2018; von Hippel et al., 2011). Although these studies have suggested that women leaders are likely to adopt a more masculine, dominant leadership style when immersed in male-dominated contexts, many rely on only self-report data of masculinity and failed to include other reports of behaviors or measures of effectiveness. Thus, by relying on only descriptions of masculinity or self-reported data, we

cannot confidently conclude that these reported increases in masculinity are observable in leadership behaviors. Therefore, this study aimed to improve upon previous research by using multisource data and measuring various leader behaviors and operationalizations of effectiveness to determine if women leaders in male-dominated contexts behave more masculinely in their leadership roles.

### ***Social Learning***

The socialization process in organizations may also explain why women leaders are likely to adapt to the masculine culture in which they are immersed. Over time, organizations become more homogeneous through processes like attraction-selection-attrition (ASA; Schneider, 1987) and social learning. Through continued exposure to organizational values, messaging, culture, policies, and leaders, it has been shown that organizational members tend to adapt their values and personalities to match those around them (Schneider et al., 2011). Those who are not a good fit and do not adapt are less likely to stay in an organization. Therefore, when women leaders are exposed to an aggressive, competitive, dominant, masculine culture (Campuzano, 2019), they are more likely to exhibit a leadership style that matches.

Relatedly, women leaders in male-dominated industries are less likely to have access to female role models and mentors (Campuzano, 2019; Lekchiri & Kamm, 2020; Lyness & Grotto, 2018; Martin & Bernard, 2013), an oft-reported barrier for women leaders. This lack of female role models likely presses women leaders to adopt a more masculine leadership style in these contexts in two ways. First, female role models provide a buffer against the threats to their leadership identity that women experience when they are a numerical minority within the organization (Lyness & Grotto, 2018). Thus, women with more female role models are less likely to feel the need to adapt and distance themselves from their feminine traits (Hoyt &

Murphy, 2016; Marin & Bernard, 2013). Second, leaders learn how to behave through experience and through watching others (Kempster & Parry, 2014). Thus, when women leaders observe the mostly male leaders in their surroundings, they are more likely to adopt similar leadership behaviors as their male role models have demonstrated for them (Isaac & Griffin, 2015). Therefore, one would expect that the more male-dominated the industry women are leading in, the more likely they are to exhibit more agentic, masculine leadership behaviors. Thus, I hypothesized that the more male-dominated the industry a woman is in, the more likely she will demonstrate agentic, masculine leadership behaviors.

*Hypothesis 1: Women will exhibit more agentic, masculine leadership behaviors as the percentage of men in the industry increases.*

The influence of gender composition on leader behaviors is likely to be relevant on a micro-level as well. However, there is a shortage of research examining the gender composition of immediate workgroups on leader behaviors despite it being a more proximal influence than organization or industry gender composition (Shen & Joseph, 2021). Nevertheless, the limited research available has suggested that a work group's gender composition or ratio influences leadership behaviors. For example, Emmerick et al. (2009) examined the impact of gender ratios in an organization. They found that men exhibited less initiating structure behaviors when working in organizations with more females. While there were no differences in women leaders' consideration or initiating structure behaviors, this may be due to range restriction considering 60% of the sample reported gender ratios below 30% and the average ratio of females for the gender composition variable was 27% and the maximum was 45%. Therefore, there was not much variation in gender composition, with all the work groups still reflecting a significant male majority or failing to achieve at least a gender balance. Moreover, only 27% of the sample was

women. Therefore, a more thorough investigation of the influence of gender composition in the immediate context on women leaders' behaviors would provide clarity, and this study aimed to address this issue.

However, despite Emmerick et al., (2009) failing to demonstrate differences in women's behaviors, women are likely to demonstrate differences in their leadership behaviors across contexts of differing gender compositions. Prior research has suggested that as the proportion of women increased, women leaders would exhibit more communal, consideration behaviors. For example, Moskowitz et al. (1994) found that women behaved more communally in general and even more so in their interactions with other women. Additionally, Gardiner and Tiggemann (1999) observed that female managers were more oriented towards interpersonal leadership than male managers when they were in female-dominated industries. Relatedly, Carli (1989) found that leaders of both genders used more aggressive and direct styles of influence when dealing with men than women, suggesting that women leaders in male-dominated workgroups would be more likely to exhibit agentic behaviors. Several studies supported this proposition by demonstrating that it is harder for women to establish their legitimacy in a male-dominated context. For instance, Born et al. (2020) found in an experimental study that women leading in primarily male workgroups were less influential and received less support from their team than women leading in predominantly female workgroups. Further evidence suggested that women's status, influence, and speaking time decrease as the number of men in their group increases (Mendelberg & Karpowitz, 2014). Thus, women may encounter fewer challenges establishing their authority in teams with more women and experience less need to exhibit more agentic behaviors to establish their legitimacy.

To summarize, as the number of women in their immediate context increases, the salience of female leaders' gender and their minority status decreases. Overall, gender is more salient for women than men in leadership roles, regardless of the gender composition of the context, but particularly in male-dominated contexts like c-suite positions (Chin, 2014; Lyons & McArthur, 2007; Rudman & Phelan, 2008). Further, leaders in female-dominated contexts feel safer to be themselves in their roles, experience less pressure to act in a certain way from society and colleagues (Raisene et al., 2020), feel happier in their roles, and perceive their roles to be more meaningful (Qian & Fan, 2018). Therefore, it is likely that women leaders would not feel the same level of pressure to mask their femininity in more gender-neutral workgroups. Thus, as the number of women there are in a female leader's immediate context increases, the desire to minimize their femininity by acting in more agentic, masculine ways would decrease. Therefore, I hypothesized that women leaders exhibit more communal leadership behaviors as the number of men in their immediate work group decreases.

*Hypothesis 2:* Women will exhibit more communal, feminine leadership behaviors as the percentage of men in their immediate work group decreases.

While the gender composition of a leader's context has been studied less with less classically gendered leader behaviors, the differences in leader role behaviors – what leaders focus on and do in the organization— may provide another example of how gender role expectations have manifested in leaders' behaviors. Women are expected to be communal and warm and often have behavioral expectations that stem from the notion that women should "run the household" (Eagly et al., 2020; Heilman, 2001; Rudman & Phelan, 2008). Operational behaviors can be seen as aligning with that expectation. For example, a study by the Catalyst organization (2006) examining executives' perceptions found that men and women reported

women being better at "caretaking skills" and men better at "taking charge skills." By imposing order and executing on plans, women fulfill the expectations that they should "run the household and care for others." Thus, operational/tactical leader role behaviors may be perceived as schema-congruent, communal behavior for women.

At the same time, this perception that men take charge by setting a vision and establishing a strategy reflects the consistent viewpoint that men act in more agentic manners. Research supporting this logic has demonstrated that strategy-related role behaviors are perceived as more masculine by both men and women (Atwater et al., 2004). Thus, strategic leadership may be another example of leader role and gender role expectations coalescing for men. Supporting this alignment are findings that men have engaged in more strategic leadership behaviors such as setting direction, driving innovation (Kaiser & Wallace, 2016), and articulating a vision (Dragoni et al., 2011). Moreover, men have been found to be viewed as more visionary than women (Ibarra & Obodaru, 2009) and to score higher on strategic knowledge exams (Hirschfield & Thomas, 2011).

Overall, the research on role-related leader behaviors and skills has found consistently that women are more operationally focused, and men are more strategically focused. Therefore, one could argue that these less often studied behaviors may be another example of how leader behaviors align with and are influenced by the expectations that women behave more communally, and men behave with more agency. However, little attention has been explicitly paid to the context in those studies, as discussed. Many studies documenting this prevalence of women leaders engaging in less strategic leadership behaviors and exhibiting lower strategic leadership knowledge used samples from predominantly male-dominated industries (e.g., Hirschfeld & Thomas, 2011; Kaiser & Wallace, 2016) without acknowledging the impact that

may have on leader behaviors. Thus, it could be that the tendency for women to be more focused on operations than strategy is due to or exacerbated by male-dominated contexts. For instance, Campuzano (2019) found that in male-dominated settings, women leaders often try to leverage their femininity in strategic ways to buffer against the potential penalties of more agentic behaviors. Therefore, the enhanced attention to operational, tactical role behaviors may reflect women leaders' leveraging their communal tendencies to counteract the agentic interpersonal leadership style needed to gain authority.

Moreover, occupations are more gender-differentiated than industries (Eagly et al., 2020). Thus, women working in male-dominated industries may be more likely to work in support functions than women working in more gender-neutral or female-dominated industries. These support roles often emphasize operational role behaviors over strategic role behaviors (Rudman & Phelan, 2008; Samuelson et al., 2019). Since task-relevant organizational roles generally have the most substantial influence on behavior, with gender role influences operating in the background (Chin, 2014), their experiences and their organizational role will primarily influence what women leaders do. However, when gender becomes more salient due to the gender composition of the context or the gender-typing of a task, studies have suggested that their gender identity and gender role expectations will significantly influence leaders' behaviors (Ridgeway, 2001). This often has led to them asserting themselves more in tasks that are more congruent with their gender (Wagner & Berger, 1997) to demonstrate competence and reinforce fit. Considering operational leadership and role behaviors are type casted as more feminine, one could then expect that when women's gender becomes more salient, they will engage in those behaviors more to establish their competence. Thus, I hypothesized that women leaders will

exhibit more operations-related behaviors than strategy-related behaviors and that this pattern will be exacerbated for women in male-dominated contexts.

*Hypothesis 3:* Women leaders will demonstrate more operational/tactical role behaviors than strategic behaviors.

*Hypothesis 4:* The relation between gender and operational leader behaviors will be moderated by male representation in the industry, such that women leaders will demonstrate more operational, tactical leader role behaviors as the percentage of men in their industry increases.

While the literature has provided enough evidence to support hypotheses about women leaders' behavior in differing contexts, the research focusing on how those leadership behaviors impact women's leadership effectiveness is less consistent, such that one could argue a variety of hypotheses. As discussed, the "double bind" theorizing argues that women are penalized for violating gender role expectations and leader role expectations (Eagly & Carli, 2003; Eagly & Karau, 2002). Some studies have suggested that women leaders are rated more harshly for violating leader norms, while others have suggested that women leaders are rated more harshly for violating gender role expectations (Heilman & Okimoto, 2007; Rhee & Stigler, 2014). Despite several meta-analyses examining gender and leadership effectiveness (Eagly et al., 1995; Paustian-Underdahl et al., 2014), the literature is lacking an examination of the relationship between women leader's behaviors and their effectiveness ratings as a function of the context (Ko et al., 2015; Yukl et al., 2002). As such, whether women's agentic, masculine leader behaviors are perceived as more or less effective depending on the context in which they are leaders is still unanswered. Furthermore, studies typically have examined only some combination of two of those variables without attention to the third (e.g., context and effectiveness; behaviors

and context; behaviors and effectiveness), resulting in an incomplete picture (Shen & Joseph, 2021). As such, several researchers have called for more research into women leaders' experiences (e.g., Kaiser & Wallace, 2016; Epitropaki et al., 2017; Yoder, 2002), particularly within male-dominated contexts (e.g., Campazuno, 2019; Meister et al., 2017; Shen & Joseph, 2021). In this study, I aimed to answer those calls by examining how the relationship between women leaders' behaviors and effectiveness varies as a function of their context.

*Research Question:* Do leader gender and the gender composition of contexts influence the relationship between agentic leader behaviors and effectiveness?

### **Method**

The present study employed a non-experimental design to assess the influence of gendered contexts on leaders' behaviors and effectiveness. The design of this study was heavily informed by an interactional psychology approach, which recommends the inclusion of both person and situation characteristics, cross-level analyses, and multiple outcomes measures (Terborg, 1981; Johns, 2006).

### **Participants**

The study utilized archival data collected by a private leadership development consulting firm based in the eastern United States from 2009 to 2017 (see Table 1 for more information). Organizations for which employees' data were collected approached this private leadership consulting firm to solicit their leadership development services. This service included the use of a 360-feedback instrument to collect ratings of leader behaviors and effectiveness from the leaders of interest, their subordinates, peers, and managers. As such, the data were collected for developmental purposes rather than administrative use, and the participants included here provided permission for research use of their data. When logging into the online system that

housed the feedback instrument, raters agreed to the terms of an informed consent document which verified their participation was voluntary. The feedback instrument contains 55 items and takes most raters 10 to 15 minutes to complete online. Focal leaders received feedback ratings in aggregate form, and raters' identities were not linked to the feedback they provided, except for superiors, whose feedback was identified.

Participants included managers, directors, and executives from several industries across the U.S. and global economy. The sample originally included 1875 leaders rated by approximately 25,464 colleagues, including supervisors, peers, subordinates, and other colleagues. I then removed raters who took the survey in a language other than English (189), leaders who had fewer than five raters (36), and leaders who did not provide their gender (4). I chose to choose five raters as a cut-off because of prior recommendations that four (Mahlke et al., 2019) to six raters (Hansel et al., 2010) are necessary to achieve necessary reliability, while leaders who took the survey in a non-English format were removed due to concerns around measurement equivalence. This resulted in a final sample of 1,646 leaders and 21,567 raters, with leaders receiving an average of 13 ratings each ( $SD=4.85$ ). The gender breakdown of the target leaders in the sample was approximately 52% female and 48% male (see Table 2 for more demographic information). Based on a priori power analysis for my most complex research question, I needed a sample size of 688 to yield a statistical power of at least .8 with a small effect size ( $f^2 = 0.02$ ) and an alpha of .05. Therefore, the archival sample described above provided ample power for the intended study.

## Measures

### *Leader behaviors*

Leader behavior was measured with a commercially available multisource (360°) leadership assessment instrument known as the Leadership Versatility Index® 3.0 (LVI; Kaiser et al., 2010). The LVI consists of 48-items measuring leader behaviors (i.e., performance), with four primary scales comprised of 12-items each. The four scales measure *forceful*, *enabling*, *strategic*, and *operational* leadership. The *forceful* and *enabling* scales measure the interpersonal *how* of a leader's style. The *forceful* scale on the LVI measure served as a measure of agentic, masculine leadership behaviors and was designed to measure the use of personal and position power to drive performance (Kaiser et al., 2010). Previous research has used this scale to represent masculine leadership behaviors (Kaiser & Wallace, 2016) and it aligns with agentic expectations of assertiveness, decisiveness, and confidence. A sample item is "[the leader] gives direction—tells people what to do." The *forceful* and *enabling* scales reached acceptable levels of reliability, as shown in Table 3. The *enabling* scale was designed to measure how a leader engages other people and creates conditions for them to effectively contribute (Kaiser et al., 2010) and served as a measure of communal, feminine leadership behaviors. Previous research has used this scale to represent feminine leadership behaviors (Kaiser & Wallace, 2016) and it aligns with the communal expectations to be supportive, helpful, and warm. A sample item is, "[the leader] shows appreciation—tries to make other people feel good about their contribution."

The *strategic* and *operational* scales measure the organizational *what* leaders focus on in their roles. The *strategic* scale measures the extent to which leaders' behaviors position the organization to be competitive in the future, which includes setting direction and focusing on the big picture, pursuing growth, and expanding an organization's capacity, as well as encouraging

innovation and change (Kaiser et al., 2010). The operational scale is designed to measure the extent to which leaders focus on the organization's ability to implement short-term plans, which includes coordinating the details of implementations, emphasizing efficiency, and using process discipline to create order in the organization. The strategic and operational scales reached acceptable recommendations for minimal reliability requirements (as shown in Table 3). The LVI is based on the idea that suboptimal performance can result from leader behaviors being under-emphasized or over-emphasized. Response options for each item ranged from -4 (*much too little*) to +4 (*much too much*) to facilitate the instrument's use in developmental applications. However, for this research study, I transformed this into a 9-point ordinal scale (1 to 9), with higher values indicating "more" of the behavior being rated.

### ***Leader effectiveness***

The LVI also measured three aspects of leader effectiveness, including overall effectiveness, team vitality, and team productivity. The LVI used a single item to measure overall leader effectiveness: "Please rate this individual's overall effectiveness as a leader on a ten-point scale where 5 is adequate and 10 is outstanding." Kaiser et al. (2010) provided validity and evidence for the single item overall effectiveness measure, demonstrating significant correlations with other, multi-item scales of leader effectiveness (e.g.,  $r = .86$  with Quinn, Spreitzer, & Hart's, 1991). Further, they demonstrated that reliability of this single-item rating for an individual rater (ICC[1]) is consistent with meta-analytic estimates for multi-item scales and meets the .70 minimum standard for the reliability of aggregated ratings (Kaiser et al., 2010). They also demonstrated that interrater agreement is acceptable, with average  $r_{wg}$  values range from .79 to .84 across rater groups, which is considered to be sufficient.

Team productivity refers to the volume and quality of the team's output. This was measured with a three-item scale focused on quantity of output, quality of output, and overall productivity. These items were rated using a 5-point Likert scale, with higher scores indicating more of the attribute in question. This scale proved to be reliable ( $\alpha = .81$ ).

Team vitality concerns how team members feel about the work and about each other. This was measured with a three-item scale focused on morale, engagement with the work, and cohesiveness with the same 5-point Likert scale as productivity. This scale was shown to be reliable ( $\alpha = .85$ ).

### ***Gender and Gender Composition***

**Industry Gender Composition.** Industry gender composition was operationalized as the percentage of men working in the industry according to the Household Data Annual Averages (U. S. Bureau of Labor Statistics, 2009-2017), the Labour Force, Australia, Detailed, Quarterly (Australian Bureau of Statistics), and the ILOSTAT database (International Labor Organization) depending on the country in which the organization was located. I then took the average reported percent of men in the industry across the eight years of data collection to account for year-to-year fluctuations.

**Workgroup Gender Composition.** Rater group gender composition was used as a proxy for workgroup gender composition and was operationalized as the ratio of male raters to total raters for each leader in the sample. For example, if a leader was rated by 4 male raters out of 16 total raters (excluding themselves), then the workgroup gender composition for that leader would be 25%. For raters that did not provide their gender, their ratings were still included in analyses involving leader behavior and effectiveness; however, workgroup gender composition was calculated using only those raters who reported their gender (i.e., non-reporters were not counted

in the denominator). The number of raters that did not provide gender information never exceeded two raters per leader, nor did it exceed 13% of any leaders' rating group.

**Gender.** Leaders and raters self-reported their gender identity. Gender was coded as men = 0 and women = 1. All were given an option to self-identify as other or prefer not to respond, however no leaders or raters endorsed either option.

### *Control Variables*

**Organization Size.** To account for additional contextual factors outside gender composition, organizational size is included as a control variable. Organization size was included as a control because studies have shown (e.g., Erez & Rim, 1982) that organizational size was associated with the leader behaviors demonstrated by those within the organization. Values for this variable were obtained from the private leadership development firm who provided the data, without identifying the organizations.

**Management Experience.** In the survey, leaders were asked to provide the length of time, in years and months, that they have been working as a manager in the workforce, in an open-ended format. The two responses (years and months) were combined to get a total estimate of the leader's managerial experience. This was included as a control because leadership is a skill that takes time to cultivate and those with more experience often demonstrate more versatility in the leadership behaviors they demonstrate (Kaiser & Wallace, 2016).

**Job Tenure.** In the survey, leaders were asked in an open-ended item to approximate how many years and then how many additional months they had served in their current roles. This was combined to create the total tenure of leaders in their current positions. This was included as a control on the same logic as managerial experience.

**Job Type.** In the survey, leaders were asked to indicate whether their job could be considered a line role or a support/staff role. Support/staff roles were coded as 0 and line roles were coded as 1. This was included as a control because of the previously discussed notion that support roles often require more operational behaviors while line roles can call for more strategic behaviors.

**Organizational Level.** In the survey, leaders were asked to indicate what organizational level best described their roles, 1= Manager, 2 = Director, 3= Executive. This was included as a control because studies have shown the skill sets and type of leader behaviors necessary change as people move through the ranks of leadership (Kaiser & Craig, 2011).

## Results

Before testing my hypotheses, I determined whether aggregating ratings to the group (ratee) level was justifiable by computing the  $r_{wg(j)}$  interrater agreement coefficient (James et al., 1984) and the one-way random effects intraclass correlation coefficient (LeBreton et al., 2003). Both suggested that aggregating across all (observer) rater groups was justifiable, as shown in Table 3. All  $r_{wg(j)}$  values were over .91, suggesting very strong agreement and the ICC (1) values exceeded .70 for each scale, suggesting acceptable inter-rater reliability (LeBreton et al., 2003). Therefore, I computed the mean across all observer ratings for each leader in the sample to be used in the following analyses. Descriptive statistics for all variables, including intercorrelations, are provided in Table 4. Then I checked for assumptions of normality of residuals, homoscedasticity of residuals, and lack of outliers before beginning my hypothesis testing. First, standardized residuals were analyzed, which showed that the data contained no outliers (Std. Residual Min = -3.25, Std. Residual Max = 3.04). Next, I examined the Predicted Probability plot for each following regression before interpreting results to ensure the normality

of residuals assumption was satisfied. Each plot demonstrated the plotted points aligning with the diagonal line, indicating the assumption was met. Similarly, I examined the scatterplot of standardized residuals for each regression, which depicted that the data met the homoscedasticity of residuals assumption. Therefore, I continued with interpreting my analyses in each of the below described processes.

### **Hypothesis Testing**

I conducted a hierarchical multiple regression to test Hypothesis 1, which stated that women will exhibit more agentic, masculine leadership behaviors as the percentage of men in the industry increases. First, I entered the block of control variables. Therefore, the agentic, forceful behaviors were regressed on the control variables of organizational size, tenure, experience, organizational level, and job type. This baseline model accounted for 1% of the variance in agentic, forceful behaviors, with only organizational level being a significant predictor of agentic forceful behaviors. Therefore, I removed the other control variables and re-ran the regression. Then, the percentage of men in the industry was added to the model to determine whether industry gender composition would account for incremental variance in agentic, masculine behaviors. This analysis showed that the addition of industry gender composition did not account for significant additional variance ( $\Delta R^2 = .002, p=.253$ ; see Table 5 for additional information). Therefore, industry gender composition was not a significant predictor of agentic, masculine behaviors for women leaders ( $\beta = -0.04, p=.253$ ), and Hypothesis 1 was not supported.

I conducted a hierarchical multiple regression to test Hypothesis 2, which stated that women will exhibit more communal, feminine leadership behaviors as the percentage of men in their immediate work group decreases. First, leaders' communal, enabling behaviors were regressed on the control variables of organizational size, leader tenure, leader experience,

leader's organizational level, and leader job type. However, none of the control variables proved to be significant predictors of communal, enabling behavior. Therefore, I removed them from the regression and started by adding the percentage of men in the workgroup to the model to determine if workgroup gender composition would account for variance in communal behaviors. This model accounted for 1% of variance in communal, enabling behavior, as shown in Table 5, and the gender composition of the workgroup was a significant predictor ( $\Delta R^2 = .013, p = .001$ ). Moreover, the negative beta weight ( $\beta = -0.11, p = .001$ ) indicated that as the number of men in the immediate workgroup decreased, the communal, enabling behaviors women demonstrated increased, supporting Hypothesis 2.

To test Hypothesis 3, which stated women leaders will demonstrate more operational behaviors than strategic behaviors, I conducted a paired or dependent samples t-test. This allowed me to examine whether mean differences existed between women leaders' operational and strategic behaviors. There was a statistically significant difference between the operational behaviors and strategic behaviors demonstrated by women leaders, showing that women leaders do engage in more operational behaviors than strategic behaviors (see Table 6). The average mean difference in operational and strategic behaviors for women was .187, with a 95% confidence interval ranging from .167 to .209. The Cohen's *d* statistic indicated a medium effect size ( $d = 0.59$ ; Cohen, 1988). Therefore, Hypothesis 3 was supported. While this difference was observed for male leaders as well, the effect was smaller for male leaders than for women leaders (see Table 6 for more information).

To test Hypothesis 4, which stated that women leaders will demonstrate more operational behaviors as the percent of men in their industry increases, I conducted a hierarchical linear regression to examine whether industry gender composition was related to the operational leader

behaviors demonstrated by women leaders. First, I entered the control variables; operational behavior was regressed on the control variables of organizational size, leader tenure, leader experience, leader's organizational level, and the type of job. Only leader tenure and experience showed to be significant predictors of operational behaviors; therefore, the other control variables were removed, and the model was rerun. This baseline model accounted for 2% of the variance in operational behaviors (see Table 5). Next, the percentage of men in the industry was added to the model to determine if industry gender composition would account for incremental variance in operational behaviors. This analysis showed that industry gender composition did not significantly explain additional variance in operational behaviors ( $\Delta R^2 = .002$ ,  $p = .199$ ) and was not a significant predictor of operational behaviors ( $\beta = -0.04$ ,  $p = .199$ ). Therefore, Hypothesis 4 was not supported.

### **Research Question**

The research question asked whether leader gender and the gender composition of contexts moderated the relationship between agentic leader behaviors and effectiveness. For this study, this question can be viewed as embodying two distinct sets of research questions, one for gender composition in the form of industry gender composition and the other in the form of workgroup gender composition. To answer the first set of research questions, I investigated whether leader gender and industry gender composition moderated the relationship between agentic behavior and effectiveness. I conducted three hierarchical moderated multiple regressions, with a separate regression for each effectiveness measure (overall effectiveness, team productivity, and team vitality; see Table 7). For these analyses, I used the entire leader sample (i.e., both men and women leaders). For each regression, I first started by regressing the effectiveness measure on the control variables of leader's managerial experience, tenure,

organizational level, job type, and company size in the first block. Only managerial experience, tenure, and company size were shown to be significant predictors of effectiveness; therefore, they were the only control variables retained in the regression. For the regression focusing on effectiveness in the form of team productivity, only company size and tenure were retained. For the regression focusing on team vitality, tenure was the sole control variable retained. In the second block, I regressed the effectiveness measure on the main effects of gender, agentic behaviors, and industry gender composition. In the third block, I entered the interaction terms for gender and agentic behaviors, and agentic behaviors and industry gender composition. Then in the final block, I entered the three-way interaction term between gender, agentic behaviors, and industry gender composition. For each of the three regressions in this set, the three-way interaction terms were not significant, which suggests that gender and the industry gender composition do not jointly moderate the relationship between agentic leader behaviors and effectiveness (overall effectiveness,  $\beta = 0.01$ ,  $p = .915$ ; team productivity, ( $\beta = 0.01$ ,  $p = .866$ ; team vitality, ( $\beta = -0.06$ ,  $p = .196$ ).

For the second set of regressions investigating the effect of the workgroup gender composition and gender of a leader on the relationship between agentic behaviors, and leader effectiveness, I followed the same steps outlined above for the first set, with industry gender composition replaced by workgroup gender composition (see Table 8). Once again, the only control variables retained were managerial experience, tenure, and company size, with the same control variables included for each effectiveness measure as they were in the first set. For each of the three regressions in this set, the three-way interaction terms were not significant, which suggests that gender and the workgroup gender composition do not jointly moderate the

relationship between agentic leader behaviors and effectiveness (overall effectiveness,  $\beta = 0.03$ ,  $p = .534$ ; team productivity, ( $\beta = -0.02$ ,  $p = .664$ ; team vitality, ( $\beta = -0.05$ ,  $p = .279$ ).

### **Supplemental Analyses**

However, since the two-way interaction between gender and agentic behaviors was a significant predictor of overall effectiveness in both sets of regressions, I decided to conduct supplementary analyses to determine if the interaction between leader gender and agentic behaviors and the interaction between leader gender and communal behaviors could account for incremental variance in effectiveness beyond the control variables, gender composition of the context, and the four measured leader behaviors. I conducted three hierarchical moderated multiple regressions, with a separate regression for each effectiveness measure (overall effectiveness, team productivity, and team vitality; see Table 9). For each regression, I started by regressing the effectiveness measure on the control variables of leader's managerial experience, tenure, organizational level, job type, and company size in the first block. The significant control variables of managerial experience, tenure, and company size were retained. The overall effectiveness regression retaining all three, the team productivity regression incorporating experience and company size, and the team vitality regression only included tenure. In the second block, I regressed the effectiveness measure on the main effects of gender, agentic, communal, operational, and strategic behaviors, as well as industry and workgroup gender composition. In the third block, I entered the interaction terms for gender and agentic behaviors and gender and communal behaviors variable. There were no significant interactions between communal behaviors and gender for the three effectiveness measures. However, for overall effectiveness and team vitality, there were significant interactions between gender and agentic leader behaviors (overall effectiveness,  $\beta = -0.11$ ,  $p = .007$ ; team productivity,  $\beta = -0.07$ ,

$p = .139$ ; team vitality,  $\beta = -0.09$ ,  $p = .043$ ). To further understand the interaction effect, I graphed each as Aiken and West (1991) suggested to identify the interaction's form. As shown in Figure 1, women were perceived as more effective than men when engaging in less agentic leader behaviors. However, as agentic leader behaviors increased, women's perceived effectiveness levels decreased, and men's perceived effectiveness levels increased. A similar pattern was exhibited for team vitality. Women were rated as higher in team vitality when exhibiting agentic behaviors below the average amount, and women were rated as lower in team vitality when exhibiting agentic behaviors above the average amount demonstrated. Meanwhile, men's team vitality ratings increased as their agentic leader behaviors increased.

### **Discussion**

The results of this study provided mixed evidence for the relationship between contextual characteristics and women leaders' behaviors. Results indicated that the gender composition of the industry generally does not have a significant association with women leaders' behaviors or effectiveness, in contrast to previous research (e.g., Emmerick et al., 2009; Paustian-Underdahl et al., 2014; Wolfram & Mohr, 2010). For instance, results did not support the first hypothesis, which predicted that women leaders would exhibit more agentic, masculine behaviors as the percentage of men in the industry increased. Previous research found that women leaders tend to describe themselves in more masculine manners when in male-dominated contexts (Faniko et al., 2016;2021), suggesting that women may behave more masculinely in male-dominated industries. However, this is the first study to directly examine whether women leaders behave in more masculine, agentic manners. The results show that the gender composition of the industry did not relate to the amount of agentic leader behaviors demonstrated. Moreover, results did not support

the third hypothesis that women leaders would exhibit more operational behaviors as the percentage of men in the industry increased.

Nonetheless, the results of this research provide supporting evidence that the gender composition of the more immediate context, a leader's workgroup, does relate to women leaders' behaviors. Results demonstrate that women exhibited more communal leader behaviors as the number of women in their workgroups increased, however the effect size was small. This supports the limited previous research finding that women lead in more interpersonally focused ways generally and particularly when in female-dominated contexts or in more heterogeneous work teams (Gardiner & Tiggemann, 1999; Moskowitz et al., 1994; Rowold, 2011). One interpretation of these findings could be that women leaders do not feel as much pressure to mask their femininity in more gender-neutral workgroups as they do in male-dominated groups. Prior research, demonstrating that leaders in female-dominated contexts feel safer to be themselves in their roles and experience less pressure to act in a certain way from society and colleagues, supports this interpretation (Raisene et al., 2020).

Additionally, the results of this study provided supporting evidence that women leaders exhibit more operational leader behaviors than strategic behaviors. This is in line with prior research showing that women tend to engage in more operational behaviors than strategic behaviors (Kaiser & Wallace, 2016). Therefore, this could be interpreted as evidence that operational and strategic behaviors could be viewed as aligning with communal and agentic gender role expectations. However, supplemental analyses demonstrated that this pattern is the same for male leaders as well, though the effect was more prominent for women ( $d=.59$ ) than men ( $d=.32$ ). As such, leaders across the sample exhibited more operational behaviors than strategic behaviors, suggesting that operational behaviors are more common than strategic

behaviors in leaders, regardless of gender and the fact that most leaders in the sample are in higher-level leadership positions that require more strategic thinking and strategic decision-making (Mumford et al., 2007). One potential explanation for this difference is that developing strategic thinking skills often requires more time and resource-intensive development experiences than operational behaviors and skills, such as global work experiences, simulations, and action learning programs (Dragoni et al., 2014; Turner et al., 2018). As such, this sample could be scoring, on average, lower in strategic leader behaviors because they have not had the extent of developmental experiences that facilitate strategic leader behaviors as they have had that facilitate operational leader behaviors. Moreover, previous research has shown that women are often given less opportunity to engage in those types of developmental experiences (Lyness & Thompson, 2000), which supports the more considerable differences between operational and strategic leader behaviors for women leaders found in this study. An alternative explanation could be that leaders are stronger in operational behaviors due to more opportunity to develop and use those skills which ultimately results in them overdoing operational behaviors, as leaders tend to engage in more behaviors that align with their strengths (Kaiser & Overfield, 2011).

Although results suggest that the context's gender composition and leader gender do not jointly impact the relationship between agentic leader behaviors and effectiveness, they did suggest that leader gender does moderate the relationship between agentic leader behaviors and effectiveness. There was a significant interaction effect between leader gender and agentic leader behaviors on overall leader effectiveness, such that women exhibiting more agentic leader behaviors were rated as lower in overall effectiveness than women who exhibited less agentic leader behaviors. In contrast, the opposite was true for men, such that men who exhibited more agentic behaviors were rated higher in effectiveness than men who exhibited lower agentic

leader behaviors (as seen in Figure 1). For team vitality, agentic behaviors were most strongly related to effectiveness for men then women, with women exhibiting lower agentic behaviors rated as higher in team vitality than men with a similar level of agentic behaviors. As seen in Figure 2, men who engaged in more agentic behaviors are rated higher in team vitality than women who exhibit a similar level of agentic behaviors. These findings support Johns (2006) suggestion that the relationship between behaviors and effectiveness may differ depending on how it is operationalized, so it is important to incorporate varying operationalizations when possible. However, of more importance, taken together, these findings indicate that the answer to the previously posed question of which penalty—violating gender role expectations or leader role expectations—is more impactful on perceptions of leader effectiveness for women is that violating gender role expectations is more harmful on perceptions of leadership effectiveness. As women who demonstrated more agentic leader behaviors—a violation of gender role expectations—were rated as less effective.

Moreover, supplemental analyses demonstrated that the relationship between communal, enabling leader behaviors and leader effectiveness was not significantly moderated by gender. Therefore, communal behaviors had the same relationship with effectiveness for men and women, signaling that only variations in agentic leader behaviors have a unique relationship with effectiveness for women leaders. As such, there is more backlash for women leaders who violate gender role expectations than leader role expectations as suggested by previous research (e.g., Bligh & Kohles, 2008; Heilman & Okimoto, 2007; Larsson & Alvinus, 2020; Paustian-Underdahl et al., 2014; Rudman & Phelan, 2008; von Hippel et al., 2011). However, it is important to note that the effect size for this difference is small and could be more appropriately interpreted as good news for women leaders, such that the effect sizes appear to be shrinking

over time (e.g., Eagly et al., 1992). A recent meta-analysis demonstrated that public opinions on gender stereotypes have changed, with the difference in agency expectations decreasing, such that the association of agentic behavior with men is decreasing and the association with women is increasing (Eagly et al., 2020). Therefore, these results could be interpreted as supporting evidence of these changing stereotypes, such that women behaving in an agentic manner is not viewed to be a violation of gender role expectations as extensively as it has been interpreted in the past.

### **Research Implications**

The study and the results have several implications for future research. One of the considerable contributions to the literature this study made was expanding the leadership behaviors examined to include *how* a leader leads and *what* the leader does for the organization. This study aimed to clarify inconsistencies related to gender differences in effectiveness by integrating the less-researched leadership theories of role-related leadership behaviors, such as operational and strategic behaviors (i.e., *what* leaders do and focus on in organizations; Kaiser et al., 2012). By including role-related leader behaviors in addition to the interpersonal leader behaviors, this study integrates psychology and business approaches to the study of leadership while building a bridge between what researchers and practitioners are interested in. Moreover, strategic leader behaviors were found to be the strongest predictor of overall effectiveness and team productivity, while they were the second strongest predictor of team vitality. As such, this study provides further evidence suggesting that including more comprehensive coverage of leader behaviors in the examination of gender differences in leader effectiveness is crucial, and likely critical, to understanding why gender differences in effectiveness have been documented. Relatedly, because this study more sufficiently covers the extent of the leader behavior domain,

it provides both dependent and independent variables that are changeable and of interest (Thomas & Tymon, 1982), which is vital for closing the scientist-practitioner gap.

Further, this study utilized an interactional approach, explicitly examining the influence of context on leader behaviors and the effectiveness on those behaviors in terms of the gender composition of the industry and the workgroup. This is a significant contribution as it addresses the lack of attention to contextual variables is consistently cited as a limitation of the leadership field (Bryman et al., 1996; Chin, 2014; Chin & Hucles, 2007; Dinh et al., 2014; Liden & Antonakis, 2009). Additionally, this interactional approach answers more specific calls for additional research on contexts of differing gender compositions and how they interact with leaders' genders to influence leaders' behaviors and effectiveness (e.g., Arvate et al., 2018; Chin, 2014; Epitropaki et al., 2017; Kaiser & Wallace, 2016, Yoder, 2001). As such, this study addresses the three classes of variables that are most likely to explain leadership effectiveness: traits, behaviors, and situations (DeRue et al., 2011). This is a valuable contribution to the literature because previous studies often focus on bidirectional relationships between leadership and contextual variables, if they are included, without examining how the two interact to impact effectiveness (Hartnell, 2016), which limits the depth of our understanding.

Further, by using multisource data from organizations across several industries, this study addressed several issues in the current literature related to gender differences, leadership, and gendered contexts. First, having a broader range of industries prevented range restriction issues like those seen in other studies and allowed for a more robust examination of the relationship between context's gender composition, leader behaviors, and leader effectiveness. Second, many studies have approached industry gender composition from a categorical perspective (e.g., Larsson & Alvinus, 2020); yet, how researchers have defined cut-offs for those categories have

not been consistent, making it challenging to integrate findings across the literature. Therefore, this study's utilization of a continuous variable approach for industry gender composition eliminated issues around inconsistent cut-offs and unnecessary attenuation of variance seen in the literature, making a valuable contribution to this area of research by allowing for easier synthesis of results across future studies.

Lastly, much of the queen bee and tokenism research related to women adapting to masculine cultures has relied on self-report ratings of masculinity and has not measured specific leadership behaviors using self or other data (with exception to Ko et al., 2015; Larsson & Alvinus, 2020). By utilizing multisource measures of behaviors and effectiveness, this study sought to corroborate propositions that women identifying as more masculine in male-dominated contexts translates to behaving in more masculine ways in an observable, noticeable manner to others. While this was not substantiated, the lack of support provides further evidence suggesting that the influence of industry demographics on leader behavior is not clear and is still worthy of further exploration.

### **Practical Implications**

The findings of this study lend themselves to several practical applications. First, results suggest that women leaders tend to lead in a more person-centered manner when their immediate workgroups are not comprised of men primarily. Furthermore, because workgroup gender composition was a significant predictor of the three measures of effectiveness, organizations should be aware of the gender composition when building teams and intentionally strategic about creating gender diverse teams when appropriate. While this does not mean any selection decisions should be made based on gender identity, it does mean that these results strengthen the business argument for the importance of diverse teams. Communal leader behaviors and

perceived leader effectiveness decrease as the percent of men in a workgroup increases; therefore, having more gender-balanced teams will improve performance and team climates, as demonstrated by previous research on diversity in teams (e.g., Diaz-Garcia et al., 2013; Lee et al., 2018; Nishii, 2012). However, practitioners should keep in mind the smaller size of the effects and be intentional about evaluating whether the impact of the gender composition of the workgroup is observable in their organizations. In a time when employees are expecting more empathy and personal connection from their leaders, creating organizational contexts that encourage and facilitate communal, caring leader behaviors is crucial for organizations. However, practitioners should keep in mind the smaller size of the effects and be intentional about evaluating whether the impact of the gender composition of the workgroup is observable in their organizations.

Another important implication relates to creating developmental programs, particularly for women leaders. Results showing that women are penalized for demonstrating higher agentic behaviors, regardless of the context, highlight that advice to intentionally act like "one of the boys" to fit in better (Martin & Bernard, 2013; Meister et al., 2017) is likely more harmful than helpful. Albeit with the small observed effect sizes, this advice may be increasingly less detrimental, it would still be beneficial for practitioners and organizations to focus more on helping women leaders feel comfortable in their own leader identities rather than encouraging assimilation. Moving forward, leadership development programs tailored to the needs of female leaders should encourage women leaders to show authenticity and embrace their communal tendencies. While this study did not find industry gender composition to influence the relationships between behaviors and effectiveness, prior studies have shown that women in male-dominated industries struggle to feel like they can be authentic as women. Moreover, women in

male-dominated industries report worse mental health than women leaders working in more gender-balanced or female-dominated industries (Gardiner & Tiggemann, 1999; Tophoven et al., 2015). As such, in addition to encouraging women leaders to embrace communal leader behaviors, developmental programs—especially those targeting women in male-dominated contexts—should be designed to help women leaders develop a stronger leader identity by providing them tools to cope with the pressure of finding the right balance between agentic and communal. Additionally, finding ways to create community among women leaders and helping them to find women role models can enhance their leader identity (Lyness & Grotto, 2018). If women leaders are given the space and tools needed to develop a stronger leader identity, it is likely they will become more comfortable fighting against cultural norms that could ultimately harm their careers in the long term.

Lastly, this study found that leaders of both genders scored higher in operational behaviors than strategic behaviors, with the difference being larger in magnitude for women leaders. As mentioned, this may be due to a lack of experience needed to cultivate strategic thinking abilities considering previous research has shown that accumulated work experience and cognitive ability are the strongest predictors of strategic thinking (Dragoni et al., 2011). However, neither accumulated experience nor cognitive ability can be easily or swiftly manipulated. Therefore, organizations should be more intentional about supplementing on-the-job experiences to ensure leaders gain as much out of the experiences as possible. One such way to do this is by finding ways to build in time for reflection and reviewing experiences so leaders can fully realize the learning benefits of those opportunities. Organizations can do this by instituting after-action reviews for big decisions (DeRue et al., 2010), peer learning groups that allow the processing of experience and the crowdsourcing of creative solutions or encouraging

intentional journaling for leaders to privately reflect on their lessons learned on the job (Densten & Gray, 2001). Further, organizations should create clear criteria for offering developmental experiences, like global assignments, to be sure that opportunities are offered equitably since previous research has found that women are often offered these opportunities at a lower rate. Moreover, organizations should account for how agentic leader behaviors influence women leaders' performance ratings when setting these criteria and reviewing candidates.

### **Limitations and Future Research**

There are at least four potential limitations concerning the results of this study. First, this research treated gender as a binary construct, closely related to biological sex. However, current modern conceptualizations of gender recognize that the binary differentiation between men and women does not sufficiently describe the population. In this study, the binary conceptualization was utilized for two reasons. First, our current theories that consider gender identity or gender differences in leadership are entirely based on binary conceptions of gender and largely relate to socialized gender roles (Cameron & Stinson, 2019). As a field, we have yet to extend these theories to non-binary populations, and therefore, there were no theoretical foundations to support potential hypotheses. Secondly, respondents had the opportunity to endorse “other” or “prefer not to respond” when filling out their gender, but no one endorsed these response options. Therefore, I could not begin the route towards developing theory and evidence around non-binary gender and leadership because the sample did not explicitly include those who did not endorse non-binary options. This could indicate that the sample ascribed to binary descriptions of gender and felt the response options sufficiently represented their gender identity, but it could also be that those who had missing data chose not to endorse the alternatives because they did not fit them. There have been recent recommendations to avoid using “other” options

because it still implies that binary gender is the default (Cameron & Stinson, 2019). Therefore, these results should be interpreted with caution when trying to generalize to people with non-binary gender identities. The current study assumes that all included leaders identify as cisgender men or women. As such, future research should focus on reexamining and expanding leadership theories and gender difference research to incorporate non-binary conceptualizations of gender and, when doing so, be as inclusive as possible when providing response options to questions about gender identity as outlined in recent American Psychological Association inclusive language guidelines (APA, 2021).

The second limitation concerns the scale's original design and anchors. Data were collected using a scale of -4 to + 4, with negative numbers representing too little, positive numbers representing too much, and zero indicating just the right amount, of the behavior in question. This original design of the scale inherently incorporates contextual considerations, as raters are asked to rate a leader based on some comparison to an implicitly understood expected right amount of behaviors for the given context. While the scale was transformed to a Likert-type scale ranging from 1 to 9, it was impossible to transform the scale in a way that removed the implicit "for this context" aspect of the rating, thus the utilized ratings reflect expectations for the situation. Therefore, it could be that the industry gender composition did not seem to have a significant impact on ratings of behavior because the industry and cultural implications related to the industry could have been taken into consideration when the ratings were initially completed. Future research should utilize a scale that does not inherently consider the context to determine better whether industry gender composition predicts the behaviors demonstrated by leaders.

The third limitation is related to the use of the gender composition of the industry as the focal, contextual characteristic. The gender composition of the context is an essential contextual

characteristic to pay attention to as this is supported by the results demonstrating the impact of the workgroup gender composition on leader behaviors and previous research highlighting the impact of the industry's gender composition (e.g., Emmerick et al., 2009; Ko et al., 2015; Paustian-Underdahl et al., 2014; Wolfram & Mohr, 2010). However, utilizing the gender composition of the industry may have been too indirect of a factor to manifest observable measurable effects. The gender composition of the industry was chosen as a variable of interest as previous evidence suggests the more men there are in the industry the more likely it is there is an aggressive, show no weakness culture (Campuzano, 2019) and the less likely women leaders are to have women role-models (Lyness & Grotto, 2018); therefore, social learning is likely to hinge on male leader examples and norms. However, the percentage of males in the industry does not fully capture this; therefore, it could be that a more direct measure of the related outcomes of an industry's gender composition would have been more effective and demonstrated a significant effect on behavior and the relationship between behavior and effectiveness.

This notion that industry characteristics may be too macro or far removed to predict organizational culture or individual behavior significantly is supported by previous research that demonstrated industry characteristics did not significantly relate to organizational cultures as characteristics of an organization's culture were not more similar for organizations within the same industry than organizations across industries (Chaudhry et al., 2016). Future research should consider using measures, such as the Masculinity Content Culture scale (Glick et al., 2018), to directly evaluate the extent to which a traditional masculine, aggressive culture is present in organizations, particularly those immersed in male-dominated industries. Moreover, future studies would benefit from including a direct measure of a leader's role-models and their

role models' leadership style to understand how the exemplified behaviors were related to the target leaders' behaviors.

The fourth limitation worthy of consideration is the potential impact of idiosyncratic rater effects on the reliability and validity of multisource data. Scullen and colleagues (2000) demonstrated that idiosyncratic variance in self and other ratings accounted for more variance than performance, suggesting that ratings may be a larger reflection of the rater than the ratee. There is potential that having such a large amount of variance being attributed to the rater could have attenuated some of the effects and may explain why effect sizes were generally small across all analyses. However, recent research by Jackson and colleagues (2020) parsed rater and source effects apart and found that source effects and a general performance dimension account for a combined 60-80% of the variance, thereby validating the idea that multiple perspectives are important since each rater group is thought to have unique insight on a leader. Moreover, they found that aggregating across raters minimized rater effects, which are often considered to be error, and helped to minimize source effects. Therefore, since ratings were aggregated across raters in this study, the potential impact of these idiosyncratic effects are likely minimal. However, future studies should consider whether examining leader behavior at the dimensional level is still an appropriate standard due to the large general performance factor found.

## **Conclusion**

For decades, research has focused on gender differences across leader behaviors and effectiveness without enough attention to how contextual characteristics influence those differences. However, we now know that the gender composition of the context plays an important role in the leader behaviors women exhibit. Specifically, the gender composition of women leaders' workgroups relates to the extent of communal, enabling leader behaviors

demonstrated. Moreover, this study provided evidence supporting the notion that violating gender role expectations is more negatively related to perceived effectiveness than violating leader role expectations. Therefore, we can better equip women leaders to understand how their behaviors impact perceptions of effectiveness. Further, this study suggested that future leadership research should more fully examine role-related behaviors, by finding them to be significant predictors of effectiveness and to demonstrate gender differences as well. Future research and developmental interventions will benefit from this study's accumulated evidence.

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**Table 1***Represented Organizations in the Sample and Associated Industry Demographics*

Industry	Location	% of Men <sup>a</sup>	Leaders	
			Women	Men
Healthcare & Social Assistance <sup>b</sup>	United States	21%	139	75
Manufacturing <sup>b</sup>	United States	71%	191	192
Financial Services <sup>b</sup>	United States	47%	125	126
Financial Services <sup>c</sup>	Australia	46%	96	96
Pharmaceuticals <sup>d</sup>	Western Europe	50%	131	132
Energy <sup>d</sup>	Western Europe	76%	112	102
Entertainment <sup>b</sup>	United States	54%	59	71

*Note.* Each industry is represented by an individual company. Companies ranged in size from 2,000 to 223,000.

<sup>a</sup> Percent of Men in the industry reflects the average percentage of men in the industry across the years of data collection (2009-2017).

<sup>b</sup> Industry demographic information for these three industries were obtained from the Household Data Annual Averages (U. S. Bureau of Labor Statistics, 2009-2017).

<sup>c</sup> Industry demographic information for this industry was obtained from the Labour Force, Australia, Detailed, Quarterly (Australian Bureau of Statistics).

<sup>d</sup> Industry demographic information for these industries was obtained from the ILOSTAT database (International Labor Organization).

**Table 2***Demographic Characteristics for Full Sample of Leaders*

Variable	Women Leaders			Men Leaders		
	N	M	SD	N	M	SD
Age		43.65	7.99		43.16	7.05
Management Experience		12.34	7.57		12.76	6.52
Tenure in Present Job		2.91	3.13		2.89	2.82
Organizational Level						
Manager	287			249		
Director	281			262		
Executive	278			267		

*Note.* N= 852 women leaders and 794 men leaders

**Table 3***Scale Descriptive Statistics, Reliabilities, Inter-Rater Reliability, and Inter-Rater Agreement*

Scale	Aggregated across all observers				
	$\alpha$	M	SD	ICC(1)	$r_{WG(j)}$
Agentic <sup>a</sup>	0.88	4.97	0.37	0.77	0.93
Communal <sup>b</sup>	0.86	4.81	0.26	0.75	0.95
Strategic	0.88	4.76	0.25	0.72	0.95
Operational	0.71	4.91	0.19	0.73	0.95

*Note.*  $R_{wg(j)}$  values represent the average  $rwg(j)$  statistic computed across all focal leaders.

<sup>a</sup> The Agentic scale reflects the LVI's Forceful scale.

<sup>b</sup> The Communal scale reflects the LVI's Enabling scale

**Table 4***Descriptive Statistics and Intercorrelations Among Study Variables*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender <sup>a</sup>	0.52	0.5	-														
2. Experience	12.76	7.09	0.00	-													
3. Tenure	2.90	2.99	0.00	0.20***	-												
4. Org. Level			0.05*	-0.02	0.11***	-											
5. Job Type <sup>b</sup>	0.61	0.49	0.04	0.06*	0.01	0.02	-										
6. Company Size	89,618	61,993	-0.06**	0.01	0.02	-0.11***	-0.14***	-									
7. Industry % <sup>c</sup>	0.55	0.14	0.00	-0.04	-0.03	-0.01	0.02	-0.04*	-								
8. Workgroup % <sup>d</sup>	0.62	0.27	-0.29**	-0.02	-0.06**	-0.20***	-0.01	0.24***	0.05*	-							
9. Forceful	4.97	0.36	0.14**	0.05*	0.02	-0.10***	0.06*	0.03	-0.04*	0.03	█ (0.88)						
10. Enabling	4.80	0.26	-0.06**	0.03	-0.01	0.08***	-0.01	-0.04*	0.02	-0.09***	-0.68***	█ (.86)					
11. Strategic	4.76	0.25	-0.05*	0.07**	-0.08**	0.01	0.06*	0.02	-0.07**	-0.02	0.42***	0.01	█ (.88)				
12. Operational	4.91	0.19	0.13***	-0.03	0.07**	0.04	-0.06*	-0.01	-0.01	-0.02	0.12***	0.00	-0.16***	█ (.71)			
13. Effectiveness <sup>c</sup>	8.07	0.59	0.03	0.18***	0.11***	0.14***	0.02	0.13***	-0.07**	-0.10***	0.06*	0.27***	0.40***	0.13***	-		
14. Team Productivity	3.87	0.35	0.08**	0.05*	0.16***	0.23***	-0.03	0.10***	-0.05*	-0.15***	0.15**	0.07**	0.29***	0.20***	0.71***	█ (.86)	
15. Team Vitality	3.76	0.41	0.01	0.00	0.11***	0.17***	-0.01	0.00	-0.03	-0.11***	-0.06*	0.36***	0.25***	0.13***	0.68***	0.70***	█ (.916)

*Note.* These descriptive statistics and intercorrelations reflect the entire sample,  $n = 1646$  leaders. Estimates of coefficient alpha ( $\alpha$ ) are reported in parentheses.

<sup>a</sup> Gender was coded as 0 for men and 1 for women. <sup>b</sup> Job type represents whether the leader's role could be considered a support/staff or line role. Support/staff roles were coded as 0 and line roles were coded as 1. <sup>c</sup> Industry % represents the average percentage of men in the industry across the years of data collection (2009-2017). <sup>d</sup> Workgroup % represents the ratio of male raters to total raters for

each leader's rater group in the sample. <sup>c</sup> Effectiveness represents the overall effectiveness single-item measure asking raters to rate leaders on the overall effectiveness on a scale of 1-10, with 10 representing higher effectiveness.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < 0.001$

**Table 5***Hierarchical Multiple Regression Analyses for Hypotheses 1, 2, and 4*

Predictors	Leader Behaviors								
	Agentic <sup>a</sup>			Communal <sup>b</sup>			Operational <sup>c</sup>		
	Model R <sup>2</sup>	$\Delta R^2$	$\beta$	Model R <sup>2</sup>	$\Delta R^2$	$\beta$	Model R <sup>2</sup>	$\Delta R^2$	$\beta$
Control Variables	0.01	0.01					0.02	0.02	
Experience									-0.11**
Tenure									0.12***
Org. Level			-0.10*						
Predictor of Interest	0.01	0.002					0.03	0.00	
% of Men in Industry			-0.04						-0.04
Predictor of Interest				0.010	0.01**				
% of Men in Work Group						-0.11**			

*Note.* N= 852 women leaders.

<sup>a</sup> Corresponds to Hypothesis 1. <sup>b</sup> Corresponds to Hypothesis 2. <sup>c</sup> Corresponds to Hypothesis 4.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < 0.001$

**Table 6**  
*Paired Samples T-Test to Examine Differences in Operational and Strategic Leader Behaviors*

Leader Behaviors						
Gender	Operational		Strategic		<i>t</i> - statistic	<i>d</i>
	M	SD	M	SD		
Women	4.93	0.18	4.74	0.24	17.24***	0.59
Men	4.88	0.2	4.76	0.25	8.96***	0.32
Operational -Strategic <sup>a</sup>						
	Operational -Strategic <sup>a</sup>				<i>t</i> - statistic	<i>d</i>
	M	SD				
Women	0.19	0.32			4.56***	0.226
Men	0.11	0.35				

*Note.* Hypothesis 3 only applied to women leaders; however supplemental analyses demonstrated that men demonstrate more operational than strategic behaviors as well.

<sup>a</sup>This compared the average difference in operational and strategic behaviors for men to women, supporting the conclusion that the tendency to demonstrate more operational than strategic behaviors is more pronounced in women than men.

\*\*\*  $p < .001$ .

**Table 7**

*Hierarchical Multiple Regression Analyses Examining Industry Gender Composition, Leader Gender, Agentic Behaviors, and Effectiveness.*

Step	Predictors	Effectiveness Ratings								
		Overall Effectiveness			Team Productivity			Team Vitality		
		Model R <sup>2</sup>	ΔR <sup>2</sup>	β	Model R <sup>2</sup>	ΔR <sup>2</sup>	β	Model R <sup>2</sup>	ΔR <sup>2</sup>	β
Step 1	Control Variables	0.06	0.06 <sup>***</sup>		0.04	0.04 <sup>***</sup>		0.01	0.01 <sup>***</sup>	
	Experience			0.16 <sup>***</sup>						
	Tenure			0.08 <sup>**</sup>			0.16 <sup>***</sup>			0.11 <sup>***</sup>
	Company Size			0.13 <sup>***</sup>			0.10 <sup>***</sup>			
Step 2	Main Effects	0.06	0.01 <sup>*</sup>		0.06	0.03 <sup>***</sup>		0.02	0.01 <sup>*</sup>	
	Gender			0.03			0.07 <sup>**</sup>			0.02
	% of Men in Industry			-0.06 <sup>*</sup>			-0.03			-0.03
	Agentic Leader Behaviors			0.04			0.13 <sup>***</sup>			-0.06 <sup>*</sup>
Step 3	Two-Way Interactions	0.07	0.01 <sup>**</sup>		0.06	0.00		0.02	0.00	
	Gender * Agentic			-0.12 <sup>***</sup>			-0.07			-0.07 <sup>*</sup>
	Industry * Agentic			0.02			0.01			0.00
Step 4	Three-Way Interaction	0.07	0.00		0.06	0.00		0.02	0.00	
	Gender * Industry * Agentic			0.01			0.01			-0.06

*Notes.* These analyses address the research question: do leader gender and the gender composition of contexts influence the relationship between agentic leader behaviors and effectiveness? These analyses used the entire leader sample, N=1646. Gender was coded as 0 for men and 1 for women.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < 0.001$

**Table 8**

*Hierarchical Multiple Regression Analyses Examining Workgroup Gender Composition, Leader Gender, Agentic Behaviors, and Effectiveness.*

Step	Predictors	Effectiveness Ratings								
		Overall Effectiveness			Team Productivity			Team Vitality		
		Model R <sup>2</sup>	ΔR <sup>2</sup>	β	Model R <sup>2</sup>	ΔR <sup>2</sup>	β	Model R <sup>2</sup>	ΔR <sup>2</sup>	β
Step 1	Control Variables	0.06	0.06 <sup>***</sup>		0.04	0.04 <sup>***</sup>		0.01	0.01 <sup>***</sup>	
	Experience			0.16 <sup>***</sup>						
	Tenure			0.08 <sup>**</sup>			0.16 <sup>***</sup>			0.11 <sup>**</sup>
	Company Size			0.13 <sup>***</sup>			0.10 <sup>***</sup>			
Step 2	Main Effects	0.07	0.02 <sup>***</sup>		0.09	0.05 <sup>***</sup>		0.03	0.02 <sup>***</sup>	
	Gender			-0.01			0.02			-0.01
	% of Men in Work Group			-0.13 <sup>***</sup>			-0.18 <sup>***</sup>			-0.11 <sup>***</sup>
	Agentic Leader Behaviors			0.05 <sup>*</sup>			0.14 <sup>***</sup>			-0.05 <sup>*</sup>
Step 3	Two-Way Interactions	0.08	0.00		0.10	0.00		0.03	0.00	
	Gender * Agentic			-0.02			-0.02			-0.05
	Group * Agentic			-0.05			-0.02			-0.05 <sup>*</sup>
Step 4	Three-Way Interaction	0.08	0.00		0.10	0.00		0.03	0.00	
	Gender * Group * Agentic			0.01			-0.02			0.04

*Notes.* These analyses address the research question: do leader gender and the gender composition of contexts influence the relationship between agentic leader behaviors and effectiveness? These analyses used the entire leader sample, N=1646. Gender was coded as 0 for men and 1 for women.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$

**Table 9**

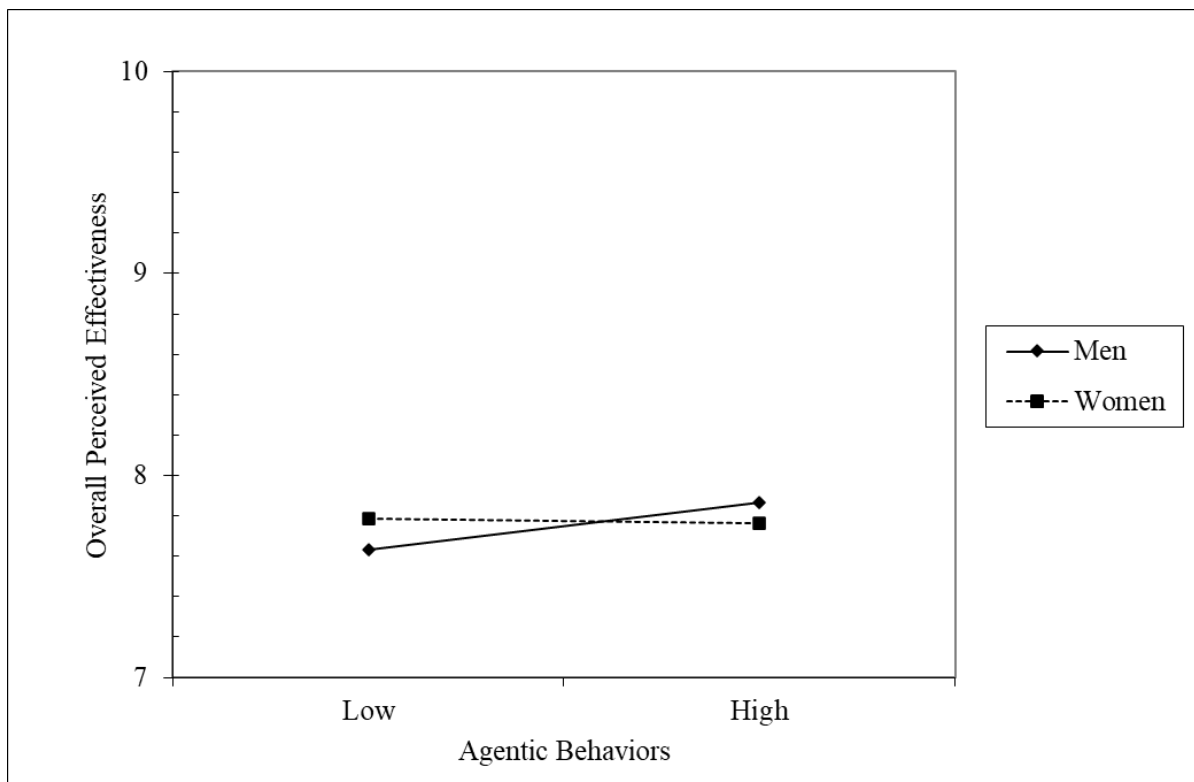
*Supplementary Analyses Examining the Moderating Effect of Gender on the Relationship between Leader Behaviors and Effectiveness.*

		Effectiveness Ratings								
Step	Predictors	Overall Effectiveness			Team Productivity			Team Vitality		
		Model R <sup>2</sup>	$\Delta R^2$	$\beta$	Model R <sup>2</sup>	$\Delta R^2$	$\beta$	Model R <sup>2</sup>	$\Delta R^2$	$\beta$
Step 1	Control Variables	0.06	0.06 <sup>***</sup>		0.04	0.04 <sup>***</sup>		0.01	0.01 <sup>***</sup>	
	Experience			0.16 <sup>***</sup>						
	Tenure			0.08 <sup>**</sup>			0.16 <sup>***</sup>			0.11 <sup>***</sup>
	Company Size			0.13 <sup>***</sup>			0.10 <sup>***</sup>			
Step 2	Main Effects	0.33	0.28 <sup>***</sup>		0.22	0.18 <sup>***</sup>		0.24	0.23 <sup>***</sup>	
	Gender			0.02			0.03			-0.01
	% of Men in Workgroup			-0.08 <sup>***</sup>			-0.15 <sup>***</sup>			-0.06 <sup>**</sup>
	% of Men in Industry			-0.03			-0.01			-0.01
	Agentic Behaviors			0.06			0.04			0.14 <sup>***</sup>
	Communal Behaviors			0.30 <sup>***</sup>			0.10 <sup>**</sup>			0.44 <sup>***</sup>
	Operational Behaviors			0.18 <sup>***</sup>			0.23 <sup>***</sup>			0.14 <sup>***</sup>
	Strategic Behaviors			0.40 <sup>***</sup>			0.32 <sup>***</sup>			0.21 <sup>***</sup>
Step 3	Two-Way Interactions	0.34	0.01 <sup>**</sup>		0.22	0.00		0.24	0.00	
	Gender * Agentic			-0.11 <sup>**</sup>			-0.07			-0.09 <sup>*</sup>
	Gender * Communal			-0.02			-0.03			-0.05

*Notes.* These analyses used the entire leader sample, N=1646. Gender was coded as 0 for men and 1 for women.

**Figure 1**

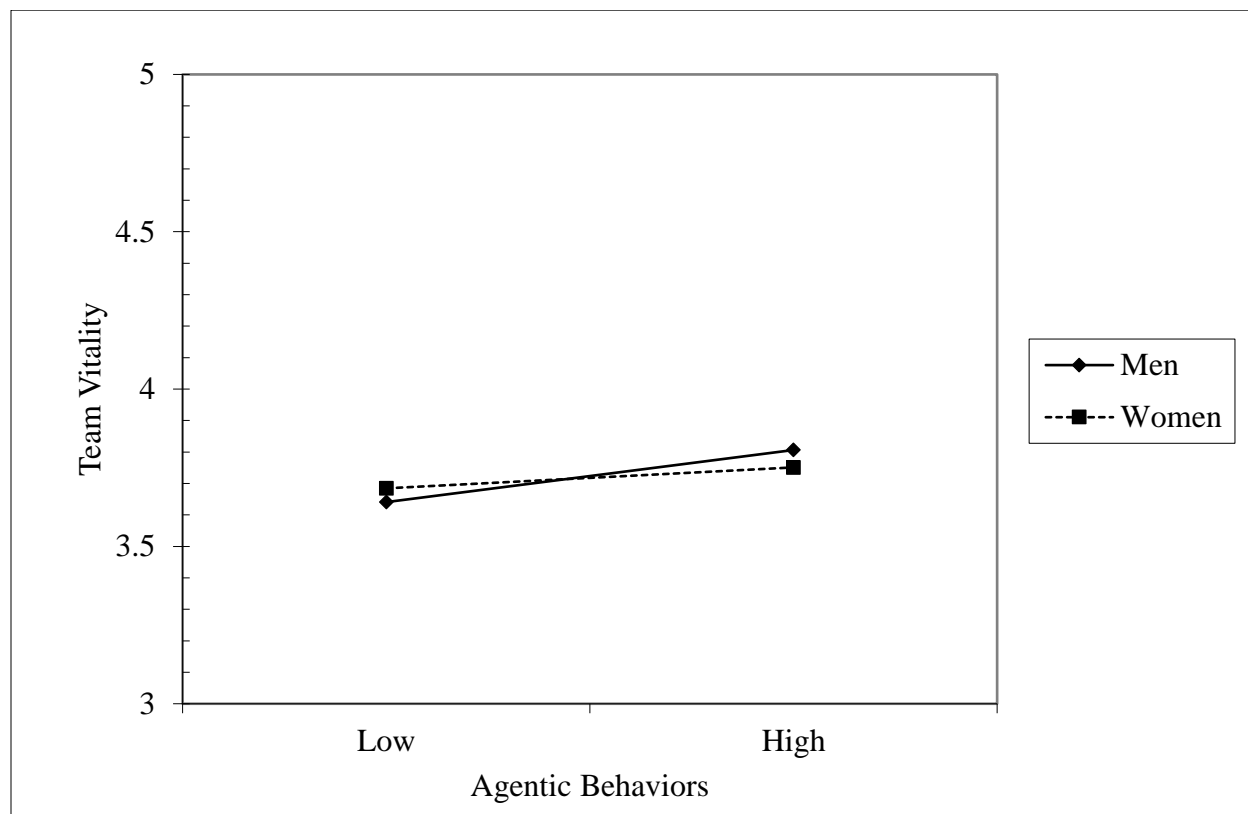
*The Nature of the Gender – Agentic Behavior Interaction in Relation to Overall Perceived Effectiveness*



*Note.* Overall effectiveness was measured with a Likert scale ranging from 1 to 10, with higher values indicating higher effectiveness. The low and high values reflect 1 *SD* above and below the average.

**Figure 2**

*The Nature of the Gender-Agentive Interaction in Relation to Team Vitality*



*Note.* Team vitality was measured with a Likert scale ranging from 1 to 5, with higher values indicating higher team vitality. The low and high values reflect 1 *SD* above and below the average of agentive behaviors.