

How Employees Learn to Speak Up from Their Leaders: Gender Congruity Effects in the Development of Voice Self-Efficacy

ABSTRACT

Voice—or the expression of ideas, concerns, or opinions on work issues by employees—can help organizations thrive. However, we highlight that men and women differ in their voice self-efficacy, or the personal confidence in formulating and articulating work-related viewpoints. Such differences, we argue, can impede women’s voice from emerging at work. Drawing on social cognitive theory, we propose that women tend to develop greater voice self-efficacy and thereby speak up more when they have the opportunity to observe female rather than male leaders speak up. Hence, we point to the potential absence of women leaders who can role model speaking up at work as a likely inhibitor of women’s voice. Using data from a correlational field study involving 368 employees and their leaders from a variety of industries in India and an experimental study in an online panel of 546 US-based workers, we found support for our hypotheses. We discuss the implications of our research for theory and practice.

Keyword: gender, employee voice, social cognitive theory

Voice—employees’ expression of ideas, concerns, or opinions on work issues (Morrison, 2011)—is an important mechanism through which employees can impact organizational policies and practices. When employees freely and openly speak up at the workplace, they can play an active role in helping organizations recognize problems and opportunities on the ground and improve outcomes such as customer service quality, worker safety, and overall unit performance (e.g. Detert et al., 2013; Lam & Mayer, 2013; Li et al., 2017; Mackenzie et al., 2011).

We propose that men and women differ in *voice efficacy*, or the confidence to formulate and articulate work-related viewpoints (cf., Tangirala et al., 2013). We argue that such differences, which likely occur due to gender role socialization (Badura et al., 2018; Eagly & Karau, 2002; Karpowitz & Mendelberg, 2014; Wood & Karten, 1986), can lead to disparities in the extent to which men and women speak up at work. For example, compared to boys, girls are often not taught vocabularies that were assertive (Hoffman, 1972); when they play games at school, they are discouraged from speaking up to authority figures (Ewing et al., 2002). As they enter the workforce, women find that they do not have sufficient opportunities to demonstrate informal leadership within teams (Eagly & Karau, 1991; Fitzsimmons & Callan, 2016). As a result, women, compared to men, may not have requisite mastery experiences over their lifetime to feel confident in exercising their voice at work. We note that this “confidence gap” between genders (Kay & Shipman, 2014) is critical to study and can potentially impact the extent to which women speak up within organizations.

Drawing on Social Cognitive Theory (SCT; Bandura, 1986; Gist & Mitchell, 1992) that emphasizes the importance of behavioral role models, we propose that direct or immediate leaders who speak up themselves can, by setting an example at the workplace, enhance voice self-efficacy in their employees. Importantly, we argue that women acquire especially higher

voice self-efficacy when they have the opportunity to observe gender-congruent role models because voice from female leaders can particularly help them internalize that agentic action on the part of women is achievable. In this process, we point to the potential absence of prominent female leaders who role model speaking up at work as a key hurdle that prevents development of voice efficacy in women and, through that, can inhibit women's voice.

In examining these predictions, we make several theoretical contributions. First, we extend voice research by highlighting how voice self-efficacy develops. Prior voice studies have largely studied antecedents such as psychological safety (Edmondson, 1999), or the extent to which employees are fearful that voice is punished at work, and voice instrumentality (Tangirala & Ramanujam, 2012), or the degree to which employees feel that they can make a difference at work by speaking up (Morrison, 2014; Sherf et al., 2020). We highlight that voice self-efficacy or personal confidence that employees have in speaking up is a developable capacity that can, on an equal footing with those other predictors, impact voice. Importantly, we point out that there are likely gender differences in voice self-efficacy that might not be evident in those other voice predictors. For instance, some scholars have concluded, "there are no statistically significant differences between workers of different genders... in the likelihood of holding back [voice] because of fear or assumptions of futility" (Detert et al., 2010). We make a case that, in contrast to safety and instrumentality, voice self-efficacy differs between men and women and that such differences can lead to lower levels of voice from women.

Second, voice literature has identified specific behaviors that leaders can engage in to encourage voice. For instance, leaders are encouraged to explicitly solicit voice or otherwise signal openness to voice from below (by displaying positive affect or taking a listening posture) so that employees feel psychologically safe or derive greater sense of instrumentality in speaking

up (Detert & Burris, 2007; Fast et al., 2014; Liu et al., 2017; Sherf et al., 2018; Tangirala & Ramanujam, 2012). We highlight that leaders can also enhance employees' voice by speaking up themselves. Such behavioral role modeling enables employees to develop self-confidence to voice, a pathway distinct from psychological safety and instrumentality (Tangirala et al., 2013). In the process, we challenge research that has indicated, from a dominance-complementarity viewpoint (Kiesler, 1983), that leaders who demonstrate agency at work encourage passivity in their employees and do not necessarily create conditions for proactivity from those employees (e.g. Grant et al., 2011).

Third, we contribute to literature that has sought to examine agentic behaviors of women at work. Important work in the area has sought to identify biases and penalties that women face at work when they display agency (e.g., Eagly & Heilman, 2016; Heilman, & Okimoto, 2007). Recently, however, scholars have urged for management research to go beyond "barriers or bias framing" to examining "remedies" for the problem (Joshi et al., 2015). We describe how the visible presence of vocal women leaders can enhance voice self-efficacy of female employees and encourage them to be agentic. This is important in the context of the finding that female leaders often distance themselves from women lower in the hierarchy so as to personally better assimilate with predominantly masculine-oriented cultures that characterizes many work settings (Derks et al., 2016). We highlight that this might lead to a reproduction of disadvantage for female employees who find themselves bereft of behavioral role models they can learn from.

Finally, there is an ongoing debate about the extent to which gender-congruent role models are important at work. Some research has indicated that gender-congruent role models are critical for women (Dasgupta & Asgari, 2004; Lockwood, 2006). Other research has indicated that women often do not identify with or assimilate behavior of their women leaders,

who they see as distinct from themselves and as having adopted more masculine ways of operating (Ely, 1994). Or that they become demoralized rather than inspired as agency demonstrated by women leaders is seen as unattainable by women lower in the hierarchy (Hoyt & Simon, 2011; Lockwood & Kunda, 1997; Parks-Stamm et al., 2008; Rudman & Phelan, 2010; Suls et al., 2002). Moreover, women are said to be more adept, than men, in assimilating behavior from cross-gender role models (Gibson & Cordova, 1999). Hence, without development of new theory, it is difficult to derive conclusions about the extent to which voice from female leaders motivates women on the frontlines to do the same. We build a conceptual model that highlights that voice of immediate female leaders not only symbolically challenges negative cognitive schema regarding women's ability to voice but also makes women feel that they themselves can enact that behavior. Hence, using voice as an exemplar, we highlight that agentic behavior on part of female leaders can impact female followers in positive ways. By the same token, we highlight how although men can act as allies at work and that their mentoring can be useful for multiple other outcomes (Sherf et al., 2017), in the context of voice, women need to observe other women and not merely men demonstrate agency.

Theory and Hypotheses

In general, self-efficacy is the self-assurance that individuals have in their personal ability to orchestrate or complete an activity (Wood & Bandura, 1989). Although self-efficacy is sometimes examined as trait-like or global—that is, generalized confidence that employees have in all aspects of their work life (e.g. Chen et al., 2001)—more often it is considered as self-perceived capability to perform in a specific task domain (Gist & Mitchell, 1992). Domain specific self-efficacy tends to be more state-like and, hence, more “plastic” or amenable to change (Brockner, 1988). Moreover, when examining the effects of self-efficacy, “specificity

matching” with the dependent variable is critical (Eden, 2001). Thus, when seeking to predict a specific behavior such as voice, it is useful to examine self-efficacy in the context of that particular behavior. Hence, we focus on *voice self-efficacy*, or confidence that employees have in formulating and articulating their opinions, ideas or concerns (Tangirala et al., 2013).

Voice self-efficacy is distinct from more widely studied predictors of voice such as psychological safety and voice instrumentality¹. Psychological safety reflects the extent to which employees feel that they are not punished for speaking up at work (Edmondson, 1999). Voice instrumentality refers to the extent to which employees feel that they can make an impact on their unit by speaking up (e.g. Ashford et al., 1998; Tangirala & Ramanujam, 2012).

Psychological safety and voice instrumentality are assessments of situational favorability for voice; they are different from self-referential assessments that individuals make about their own confidence to speak up, which is captured by voice self-efficacy. In fact, even when rewards (punishments) are present (absent) in the work environment, lack of confidence in enacting behaviors can hinder individuals from exercising agency at work (Bandura, 1986). Hence, even when situational favorability is enhanced through organizational interventions such as managerial voice solicitation (Tangirala & Ramanujam, 2012), without a concomitant increase in employees’ self-assurance, agentic behaviors such as voice are unlikely to increase (e.g., Wood & Bandura, 1989).

Gender and Voice Self-Efficacy. We propose that women can have lower voice self-efficacy. Self-efficacy is enhanced via mastery experiences that allow individuals to hone their

¹ In the voice literature, the term voice “efficacy” is sometimes used to refer to, what we call, voice instrumentality (e.g., see Morrison, 2014, p. 180), which is conceptually different from voice self-efficacy as defined here. Scholars using “efficacy” to describe instrumentality typically refer to the potential impact voice has on the external environment and not to internal self-assurance that employees have in speaking up. We not only make this conceptual distinction but also empirically establish that our findings are not accounted for by voice instrumentality.

skills (Bandura, 1986). Speaking out, is likely one such skill, that can be gained through repeated practice. However, women over their lifetime often have less access to opportunities to enact voice and thereby develop self-efficacy in speaking up (Wood & Karten, 1986). First, due to gender role expectations, agency is expected more from men than from women in everyday interactions (Eagly & Karau, 1991). Hence, there is less encouragement for women, from childhood on, to develop confidence to challenge the status-quo in their social groups (Eagly et al., 1992; Fitzsimmons & Callan, 2016; Kling et al., 1999; Pallier, 2003).

Second, women more frequently experience emotions associated with avoidant behavior such as silence (e.g., regret) (Brody & Hall, 2008); Society also often penalizes women for expressing anger-like emotions (Brescoll & Uhlmann, 2008) that can propel or motivate voice (Kish-Gephart et al., 2009). Hence, women might seek to suppress such emotions. This can also reduce voice of women in many social settings, which further prevents development of self-assurance in speaking up. Third, women tend to find less intrinsic rewards in combative discussions that might emerge from the expression of strongly held beliefs or opinions (Archer, 2004; Beck, 2001), which may further discourage them from taking up mastery opportunities over the course of their life to speak up. These social disadvantages faced by women are reproduced over time (Vial et al., 2016) as exercise of agency builds confidence and self-assurance, which in turn lead to even greater agency; that is, agentic behavior takes a “deviance-amplifying” loop and becomes self-reinforcing (Bandura, 1986; Wood & Bandura, 1989). As Karpowitz & Mendelberg (2014, p. 44) summarize, “women’s experience becomes one of looking on as men talk with other men. This in itself could reinforce women’s feelings of low confidence and failure.” Hence, we propose:

H1a: Female employees have lower voice self-efficacy than male employees.

Work on self-efficacy from the larger literature on SCT indicates that self-efficacy can powerfully motivate individuals to take on specific activities or adapt new behaviors. For instance, employees with high self-efficacy set more challenging goals (Locke & Latham, 2002), persist longer when obstacles emerge (Lent et al., 1987) and more energetically seek to overcome such obstacles (Hill et al., 1987). Translated to the context of voice, voice self-efficacy should allow employees to approach more voice opportunities in the environment, to dwell less on apprehensive cognitions before enacting voice, persist even if some of their ideas or concerns are rejected, and, in general, become more resilient and buoyant in moving from one voice episode to another (cf., Bandura, 1986). Hence, voice self-efficacy should enhance the frequency with which employees speak up. Given our earlier arguments the women experience lower voice-self efficacy, we propose the following:

H1b: Female employees voice less often than male employees due to lower voice self-efficacy.

Voice self-efficacy and role modeling. SCT indicates that when individuals have limited access to direct experiences with an activity, they still can develop self-efficacy in that activity when they are allowed to *vicariously* gain experience (Bandura, 1986). That is, individuals, when exposed to behavioral role models, who they feel are legitimate, can develop self-assurance that they too can engage in the focal behavior.

Immediate leaders—i.e., leaders who directly supervise the focal employees, can be important sources of such behavioral role modeling. Unlike more distant leaders (e.g., skip-level leaders, top management), immediate leaders are closer to employees in rank and hence more relatable as role-models (e.g. Brown et al., 2005; Mayer et al., 2009). In fact, employees might even psychologically distance themselves from leaders much higher than them in the hierarchical chain as they might feel that the behaviors demonstrated by such leaders are too aspirational and,

hence, non-attainable (Hoyt & Simon, 2011). Moreover, immediate leaders are expected to explicitly direct, supervise and set example for their employees, hence, in many circumstances, they have certain levels of legitimacy bestowed on them by organizations that peers often lack when acting as role models (e.g. Likert, 1967; Parke, Tangirala, & Hussain, *in press*).

Consequently, we focus on how immediate leaders, whom we refer to as leaders in the remainder of the paper, can boost voice self-efficacy of employees, by speaking up themselves.

Leaders who voice up can play an important symbolic as well as functional role in enhancing voice self-efficacy of their employees (Gist & Mitchell, 1992; Wood & Bandura, 1989). Symbolically, by speaking up themselves, leaders are able to signal that this is a behavior that can be enacted in the specific work context that the employees are embedded in. Moreover, given the hierarchical proximity that these leaders have with employees, employees who watch those leaders speak up can begin to visualize that they can execute voice themselves. Such cognitive simulations derived from observation can help employees vicariously develop confidence in enacting the behavior (Bandura, 1986).

Functionally, when observing leaders who speak up, employees may begin to understand *how* to enact that behavior, which can help improve their confidence in performing the behavior themselves. For instance, when speaking up, employees need to develop proficiency on a variety of factors, including choosing whether to embed their issue in a challenging or supportive frame (Burris, 2012), figuring out the most effective target (Detert et al., 2013), modulating affective tone (Grant, 2013), determining the right time to raise voice (Whiting et al., 2012), and deciding on the tactics (e.g. whether to raise voice publicly or privately; whether to connect the focal issue to other issues in the team) with which the message is delivered (Dutton et al., 2011; Isaakyan, Sherf, Tangirala, & Guenter, *in press*). By observing their leaders demonstrate voice, employees

can dissect the tactics used by the leaders and reflect on the degree of applicability to their own situation. That is, employees can direct their attention to how leaders are executing voice and mentally reenact the behavior by placing themselves in the shoes of the leaders (Bandura, 1986). In sum, employees can develop voice self-efficacy and, consequently, speak up more when they observe their leaders frequently engage in voice.

H2a: Leader's voice is positively associated with employees' voice self-efficacy.

H2b: Leader's voice is indirectly (via employees' voice self-efficacy) positively associated with employees' voice.

Gender congruence effects. For symbolic as well as functional reasons, we propose that women especially benefit from observing female rather than male leaders speak up. First, symbolically, when female leaders speak up, it not only acts as a signal to employees that voice can indeed be enacted in their organization, but also that women, in particular, can engage in that behavior. That is, it highlights that agentic behavior such as voice, which is counter-normative in the larger society for women (Eagly & Karau, 2002; Rudman & Fairchild, 2004), can be executed by women *within* the organization. Hence, for women, it potentially becomes easier to visualize, via vicarious experience derived from observing female leaders speak up, that they themselves can engage in that behavior. Hence, demographically relatable behavioral role models might more strongly enhance self-assurance in women for voicing up.

Second, functionally, women can find that the way female leaders express ideas or concerns to be more translatable to their own specific styles of communication, which may help address unique situational hurdles they face as women. For instance, men tend to make more eye-contact when speaking, extend their limbs and use hand gestures (Cashdan, 1998; Williams & Tiedens, 2016), which women may find inapplicable when trying to emulate. In addition,

women more frequently infuse emotions into their communication (Brody & Hall, 2008; Kring & Gordon, 1998; Simon & Nath, 2004), suggesting that women have a distinct, affect-laden communication profile. At the same time, women tend to downplay expression of anger (Brescoll & Uhlmann, 2008; Gibson & Callister, 2010; Simon & Nath, 2004) and raise issues in ways that are interpersonally sensitive and demonstrate an awareness of goals of others (Amanatullah & Morris, 2010; Eagly, 2009). Women are also likely to prefer more informal, private communication venues to express their concern rather than in formal, public meetings (Dutton & Ashford, 1993). Additionally, women, more so than men, have to learn ways of dealing with interruptions when speaking up (Kendall & Tannen, 1997). Hence, women who observe female leaders speak up might find that the styles, tactics and mannerisms of those leaders personally more relatable to their own situation. Consequently, women can develop greater voice self-efficacy when paired with female rather than male leaders who speak up and, thereby, themselves voice more at work.

H3a: Leader's voice, leader's gender, and employees' gender interact such that a female leader's voice, in comparison to a male leader's voice, is more positively associated with female employees' voice efficacy.

H3b: Leader's voice, leader's gender, and employees' gender interact such that a female leader's voice, in comparison to a male leader's voice, is more positively indirectly associated with female employees' voice (via female employees' voice self-efficacy).

Our theory focuses on how female leaders who speak up can help women develop stronger voice self-efficacy. We do not visualize similar gender congruence effects for men. First, given gender norms in the society, assertive behavior in men is more normative or common in social settings (Fitzsimmons & Callan, 2016). Hence, symbolically, they might not experience

a compelling need to see other men speaking up to develop confidence that they can do so too. Second, men, from their childhood to professional life, might not face the challenges that women uniquely do when speaking up (e.g., explicit discouragement; being interrupted, having to speak up multiple times to get heard; Karpowitz & Mendelberg, 2014). Hence, functionally, they might not feel a necessity to especially attend to gender congruent role models to understand how they might be able to tackle those challenges. Consequently, we do not expect gender-congruent role models to be as critical for male employees as they are for female employees.

OVERVIEW OF STUDIES

We utilized a multi-study approach to test our theoretical model using a field study and an online experiment. In Study 1, we surveyed working professionals in India. Via this study, we sought to establish external validity of our results. To complement the correlational aspect of Study 1, we conducted Study 2, in which we used an immersive online experiment to manipulate key variables. Study 2 allowed for stronger causal inferences from the data. Data, sample analyses syntax, and supplementary study materials for these two studies is available via the Open Science Framework website: <https://tinyurl.com/ycexym25>.

STUDY 1: METHODS

Sample and Procedure

Study 1 was approved by Indian School of Business IRB (Protocol #: ISB_IRB 2013-14_20). Participants were enrolled in an executive program at a top-tier business school in India. The participants were sent an email requesting participation. The email emphasized that participation was optional. Three hundred and sixty-eight employees who reported to 131 leaders responded for a response rate of 68%. Twenty percent of the employees were female; average age was 30.4 years and average tenure was 4.3 years. Fourteen percent of the leaders were

female; average age was 34.7 years and average tenure was 6.1 years. The participants were from a wide variety of industries such as financial services, internet technology, and manufacturing. The survey had 3 distinct sections in the following order: (a) "leadership section," where the employees reported on leader voice and control variables such as their quality of relationship with the leader, (b) "work attitudes section," where they reported on measures of voice self-efficacy and control variables such as psychological safety, and (c) "workplace behavior section" where they reported on a scale about their own voice behavior.

Measures

Unless otherwise noted, 7-point Likert-type scales ranging from 1 = "strongly disagree" to 7 = "strongly agree" were used. Table 1 provides summary statistics and bivariate correlations.

Leader and employee voice. In keeping with our theory that leaders' voice that is noticed by employees can help improve voice self-efficacy, we asked employees to rate the extent to which they observed their leaders speak up at work. Following prior studies (e.g. Tangirala & Ramanujam, 2012), we used 4 items from the voice scale of Van Dyne & LePine (1998) to capture voice. Sample items included, "my immediate leader develops and makes recommendations concerning issues that affect my organization" and "my immediate leader communicates opinions about work issues to others in my organization even if those opinions are different and others disagree." We asked the employees to rate their own levels of voice using the same 4-item voice scale. A positive externality of this use of self-ratings for employee voice was that we potentially avoided biases inherent in observer ratings of voice that often result in lower reports of voice for women in comparison to men (Karpowitz & Mendelberg, 2014).

Voice self-efficacy. Voice self-efficacy, as conceptualized, represents the degree of self-assurance employees have in speaking up at work. Hence, following the approach utilized by

prior studies in measuring self-efficacy in the context of citizenship behaviors (McAllister et al., 2007; Morrison et al., 2011; Zellars et al., 2002), we asked the participants to rate their *confidence* in engaging in each of the behaviors listed in the 4-item voice scale used to measure employees' voice (1= "not at all confident" to 7= "very confident"). Rather than reporting the extent to which they actually enacted the behaviors in the scale, in this instance, the participants were requested to rate the confidence they have in engaging in those behaviors².

Demographic variables. Employees reported their gender, age, education and organizational tenure. Based on information from the employees about their leaders, we reached out to the leaders to get their gender, age, education and organizational tenure.

Control Variables. First, we controlled for organizational tenure of the employees and the leaders as tenure might correlate with gender and impact results. Second, we controlled for key alternative explanations. For instance, it is possible that, due to homophily, female (male) leaders are able to develop stronger relationship with employees who are women (men). Hence, the quality of relationship in the leader-employee dyad, rather than voice role modeling by the leader, might explain employees' comfort in speaking up. We therefore controlled for leader-member exchange (LMX) between the leader and the employee using the 7-item LMX scale reported by the employees ("my working relationship with my [leader] is effective"; Scandura & Graen, 1984). It is also possible that leaders, who engage in voice, signal to employees that voicing is safe and that it is associated with positive outcomes. These alternative mechanisms

² We checked whether voice self-efficacy measured in this manner converged with an alternative measure of voice self-efficacy used in the field that, rather than ask employees to report how "confident" they feel in engaging in each of the behaviors listed in a voice measure, requests them to respond to a self-efficacy scale that has been modified to focus on voice as the target behavior (e.g., 3-item scale of Tangirala et al., 2013; sample item: "I feel self-assured about my capability to speak up about work-related issues in my organization"). In the same 1104 participants of the supplementary study that is reported in Supplementary analyses in Study 1 Results section, we found that indeed voice self-efficacy measured as in Study 1 highly correlated with the alternative operationalization of voice self-efficacy ($r = .79, p < .01$). This further enhanced our confidence in the validity of our measure.

that represent psychological safety and instrumentality afforded by the environment are distinct from voice self-efficacy, which represents self-confidence of employees and is the central explanatory mechanism invoked by our theory. Hence, we controlled for psychological safety, or the extent to which employee feel safe in challenging the status quo at work, using 3 items adapted from Edmondson (1999; “It is safe to take a risk in my organization”) and general instrumentality or degree to which employees feel that they can, in general, impact work practices via their actions using a 3-item scale³ (Spreitzer, 1995; “I have significant influence over what happens in my department”). Third, we controlled for general affectivity of the respondents. This best practice allowed us to statistically partial out common source variance that can be attributed to respondents’ disposition to consistently positively or negatively respond to survey items (Podsakoff et al., 2003), when examining our substantive relationship between employee-rated leader voice and voice self-efficacy. In particular, we used 10-item scales developed by Watson et al. (1988) to measure negative affectivity (NA), or the tendency to respond negatively, and positive affectivity (PA), or the tendency to respond positively. Pattern of results remained substantively the same with or without these controls.

Analytical Approach

In our sample, multiple employees could report to a leader, creating nested observations. Therefore, we tested our theoretical model using multi-level analyses in MPlus (Muthén and Muthén, 1998-2015) where employees’ voice, their reports of the extent to which they observed

³ This measure of general influence at work has been used in the prior literature as a surrogate for voice instrumentality (e.g., Tangirala & Ramanujam, 2012; also see coding in Sherf, Parke, & Isakyaan, 2020, meta-analyses). To confirm that this measure indeed overlaps with more direct measures of voice instrumentality, we checked how it correlated with a 3-item scale of voice instrumentality (e.g., “When I speak up with ideas or opinions, I affect how work is done in my organization”; Hussain, Shu, Tangirala & Ekkirala, 2019) using the same 1104 participants of the supplementary study reported in Supplementary analyses in Study 1 Results section. Analysis indicated that indeed our measure highly correlated with this alternative operationalization of voice instrumentality ($r = .72, p < .01$). This further enhanced our confidence in the use of this measure.

their leader's voice, and their other characteristics or perceptions (e.g., gender, psychological safety) were considered Level 1 variables. Leader's characteristics (e.g., gender) were considered Level 2 variables. We group-mean centered our substantive variables (except gender) at Level 1 to prevent conflation of within and between- effects (Preacher et al., 2010). ICC1 values indicated that there was indeed between-leader clustering (shared variance at the leader level) in employee reports of leader voice (ICC1 = .20; $F(130,233) = 1.70, p < .01$), justifying our use of multi-level analyses (Bliese, 2000). At the same time, there was no between-leader clustering in voice self-efficacy (ICC1 = .04, $F(130, 233) = 1.12, p > .10$) or voice behavior (ICC1 = -.04; $F(130, 233) = .88, p > .10$); This indicated that most of variability in these dependent variables was at the employee-level (than at the leader-level) and suggesting the possibility that employees' attributes such as their gender, the degree to which they had opportunities to observe their leaders speak up, and their gender-congruence with the leader might explain such variability, an aspect we examine with our analyses below.

STUDY 1: RESULTS AND DISCUSSION

We conducted confirmatory factor analysis (CFA) of our measured variables (voice, voice self-efficacy, psychological safety, LMX, instrumentality, positive affectivity, negative affectivity and leader voice). Given large number of items for positive and negative affectivity scales, based on prior recommendations (Little et al., 2013), we created 3 parcels, using a random algorithm, for each of those two scales. The items for the rest of the variables were not parceled. Results indicated a reasonably good fit to data ($\chi^2(436) = 1107.681$; CFI = .91, RMSEA = .06 [.06, .07]). Constraining any of the latent variables to correlate at 1.0 resulted in significantly worse fit ($p < .01$), suggesting the distinctiveness of our measured variables.

Main Analyses

Table 2 reports the results of our analyses. Supporting H1a, female employees reported lower voice self-efficacy ($b = .26, p < .05$). Supporting H1b, voice self-efficacy was positively related to employees' voice ($b = .21, p < .01$); there was also a significant indirect effect of employees' gender on their voice via voice self-efficacy (.13, 95% CI [.02, .24]) such that lower voice self-efficacy accounted for women's tendency to speak up less than men. Supporting H2a, leader's voice was positively associated with employees' voice self-efficacy ($b = .18, p < .05$). Supporting H2b, there was a significant positive indirect effect of leader's voice on employees' voice via their voice self-efficacy (.13, 95% CI [.05, .22]). Finally, results indicated that the three-way interaction between employees' gender, leader's gender and leader's voice was significant ($b = .93, p < .05$; see Figure 1). Supporting H3a, a simple slopes test indicated that leaders' voice was positively associated with women's voice self-efficacy when the leaders were female ($b = .63, p < .01$), but not when their leaders were male ($b = .13, n.s.$). Supporting H3b, indirect effect results indicated that leaders' voice was more positively related to women's voice (via higher voice self-efficacy) when the leaders were female (.22, 95% CI [.05, .38]) than when the leaders were male (.02, 95% CI [-.12, .15]); directional test of the difference between these indirect effects was significant ($p < .05$). Interestingly, men also demonstrated a similar pattern such that leaders' voice was positively associated with men's voice self-efficacy when the leaders were male ($b = .27, p < .01$) but not when the leaders were female ($b = -.10, n.s.$). However, an indirect effect analysis indicated that leaders' voice was not more positively related to men's voice (via higher voice self-efficacy) when the leaders were male (.09, 95% CI [.02, .16]) than when the leaders were female (-.04, 95% CI [-.19, .12]) as a directional test of the difference between these indirect effects was not significant ($p > .05$). This indicated that gender-

congruent role models were not associated with a substantive difference in voice behaviors for men as they were for women.

Supplementary Analyses

Study 1 was conducted in India, where the participation of women in the workforce has historically been low (e.g. Chauradia et al., 2019). This was represented in our sample where only 20% of employees and 14% of leaders were women. It is possible that gender-based differences in voice self-efficacy found in this study are merely an artifact of this unique context from which we derived our sample. Hence, we conducted a supplementary survey-based study to examine whether the proportion of women in the organizational workforce impacted the degree to which men and women reported differences in voice self-efficacy. In particular, 1200 participants were recruited using Academic Prolific panel in exchange for a small payment. We excluded 96 participants who failed attention check questions (e.g., “if you are paying attention, please select “Strongly Disagree”). The final sample consisted of 1104 working adults (55% female) in United States and United Kingdom. Among these participants, 84% worked for private for-profit organizations (in retail, warehousing, professional services, healthcare, etc.), 6% worked for local and federal/central government, and the rest in family-owned businesses or non-profits. In this survey-based study, we asked the participants to respond to a voice self-efficacy and voice scales similar to the ones used in the Study 1. They also reported on their own gender (55% female) as well on the gender composition of their organization at (a) the frontline employee level, (b) the supervisor level, and (c) the top-management level (“less than 25%,” “between 25%-50%,” “between 50%-75%” and “more than 75%”).

Table 3 provides the breakdown of women’s representation in our sample across these levels. We examined whether gender-based differences indeed manifested in this more broad-

based sample from a different national context. Employee gender was associated with employee reported voice self-efficacy ($b = .11$, $p < .05$), which in turn enhanced self-reported voice of workers ($b = .80$, $p < .05$). Indirect effects analyses indicated that women's voice self-efficacy accounted for their reported lower levels of voice (indirect effect = $.07$, 95% CI [$.01$, $.14$]), replicating our finding from Study 1 that gender differences exist in voice self-efficacy and, thereby, in voice behavior. Importantly, we examined whether gender differences in voice self-efficacy varied as a function of gender representation at any of the three levels: the employee, the supervisor and the top management levels. Analyses indicated that gender did not interact with any of these three gender composition variables to predict voice self-efficacy ($p > .10$), indicating that gender effects on voice self-efficacy were not associated with gender composition at employee, supervisory and top-management levels. Although such null results need to be interpreted with caution, they suggest that our Study 1 results were potentially not driven by gender composition of the workforce in the national context of Study 1.

Discussion

Study 1 supported our theory. Compared to men, women reported lower voice self-efficacy, which was associated with less frequent voice from them. Additionally, leaders' voice was positively related to employees' voice self-efficacy and, thereby, with employees' voice. Importantly, female employees reported greater voice self-efficacy when they were working with female leaders who speak up at work than when working with male leaders who do so. Such associations were not as evident in men as gender-congruent role modeling did not seem to be related to substantive ultimate (indirect) differences in their voice behavior.

Although Study 1 provides supportive evidence for our model, it has several limitations. First, the design of the study is cross-sectional, which prevented us from making causal claims,

especially considering our theory explicitly involves temporal elements (employee builds efficacy *after* observing the leader engage in voice). Second, as both the independent and the dependent variable were reported by employees, this study is limited by potential common method bias. However, this limitation should be considered with multiple qualifications including the fact that we statistically factored for common method biases in our analyses using previously applied practice of partialling out general affectivity of our participants (Podsakoff et al., 2003). Nonetheless, to address these limitations of Study 1, we conducted Study 2, an experimental study. In particular, to better establish internal validity, we experimentally manipulated leader's voice and leader's gender.

STUDY 2: METHODS

Sample and Procedure

Study 2 was approved by the University of Maryland, College Park IRB (Protocol #: 1207911-1: *How Supervisor Voice Develops Employee Voice Efficacy*). Six hundred working adults (300 females and 300 males) with a full-time job were recruited from Academic Prolific panel to participate in our vignette-based experiment in exchange for payment. In our analysis, we excluded 54 participants that failed either one of the two attention checks questions (e.g., "if you are paying attention, please select "Strongly Disagree"). The final sample consists of 546 participants from the United States (mean age = 31.4 years, $SD = 11.5$ years; 48.7% male). In this experiment, leader's voice and leader's gender were manipulated and participant gender was captured. This created a 2 (high leader voice vs. low leader voice) X 2 (male leader vs. female leader) X 2 (male participant vs. female participant) factorial design.

Leader voice manipulation. Participants were asked to take on the role of an entry-level employee within a team at Hennessey, Simpson & Moore Engineering Group. To enable them to

get to know their team leader, they were asked to hear that leader talk about themselves and their working style. To enhance realism of our experiment and to give the participants a sense that real people were involved, we hired professional voice recording actors to narrate audio clips as leaders. The narrator (the leader) provided a brief introduction. After which they described their working style and an incident in which they had the chance to speak up and did (in the high voice condition) or did not (in the low voice condition) do so (see Appendix A for complete written narration; the audio clips are available as an [Online Appendix](#)). To avoid confounds, these audio clips were pre-tested for equivalence in clarity, professional tone and fluent delivery; They were also of equal length and only varied in whether the leader communicated how they engage in high voice versus low voice and not on any other parameter. Specifically, in the high voice condition, the leader narrated:

I think that my boss and colleagues would describe me as a vocal person. I do believe that there's always room for improvement so I am usually the first one to speak up when I feel that we can do better, or when I feel that we need to prevent something bad from happening. I also do not hesitate to even contradict my boss. For example, recently, the VP was pushing a certain design element for a warehouse. I went to the VP and directly told the person that I think that's a bad idea as it would prove to be too expensive and that there are other cheaper designs that could be used. I did not keep my opinion to myself and directly challenged him. I believe in speaking my mind and make ripples when necessary because I think that's how I can get our work done.

By contrast, in the low voice condition, the leader narrated:

I think that my boss and colleagues would describe me as a person of few words. I do believe that there's always room for improvement, but I am usually not the one to speak up when I feel that we can do better, or when I feel that we need to prevent something bad from happening. I also do not contradict my boss. For example, recently, the VP was pushing a certain design element for a warehouse. I could have gone to the VP and told the person that I think that's a bad idea as it would prove to be too expensive and that there are other cheaper designs that could be used. However, I kept my opinion to myself and did not directly challenge him. I exercise patience and am frequently silent with my opinions and stay under the radar because I think that's how I can get our work done.

Leader gender. To manipulate the leader's gender, in the female leader condition, we hired a female voice recording actor and, in the male leader condition, a male voice recording actor. We referred to them in the experiment using stereotypically male and female names—

Jennifer and Michael—in the female leader and male leader conditions respectively. To further enhance the salience of their gender, we placed their supposed headshot photograph on the page where participants clicked play to the audio clips. These photographs were pre-tested to represent the same levels of competence, warmth and attractiveness. On the page where participants listened to the voice recordings, participants read that “Jennifer (Michael) is your direct manager at Hennessey, Simpson & Moore (pictured left). Please click below to listen to a short audio clip where she (he) describes her (his) work at the company and her (his) own working style”.

Measures.

Voice self-efficacy and Voice. After listening to the audio clip of the leader describing their workstyle, participants were asked to imagine and report how they would generally feel as well as behave as an entry-level employee while working in that company along with the leader that they have just heard. First, they were asked them to respond to a 2-item voice self-efficacy scale (1 = “extremely unlikely”, 5 = “extremely likely”) adapted to the scenario from Tangirala et al. (2013): “I would be self-assured to speak up in the company”, and “I would be confident in expressing my opinions in the company”. Second, they were asked to indicate their willingness to exercise voice in the company by responding to a 3-item scale (1 = “extremely unlikely”, 5 = “extremely likely”): “I would frequently make suggestions about how to improve work methods or practices”, “I would regularly propose ideas for new or more effective work methods”, and “I would freely make suggestions about how to do things in new or more effective ways at work.” A Confirmatory Factor Analysis (CFA) indicated that a 2-factor measurement model with voice self-efficacy and voice as distinct factors was a good fit to the data ($\chi^2(4) = 7.71, p > .05$; CFI = .99; SRMR = .01, RMSEA = .041, 90% CI [.00, .085]) and that constraining the correlation

between the two factors to one lead to significantly worse fit ($p < .05$). This indicated that the participants in the study were able to distinguish between these two constructs.

Participate gender. We used Academic Prolific’s internal demographic information to obtain participants’ gender (0 = “male”, 1 = “female”), which had been collected when the participants first signed up for Academic Prolific.

STUDY 2: RESULTS

To check the effectiveness of our leader voice manipulation, we asked participants to respond to a 3-item Likert scale (1 = “strongly disagree, 5 = “strongly agree”): “Jennifer (Michael) speaks her (his) mind on work related issues”, “Jennifer (Michael) freely expresses her (his) ideas and concerns “and “Jennifer (Michael) candidly expresses her (his) opinions to others”. Results indicated that compared to participants in the low leader voice condition, those in the high leader voice condition reported higher voice from the leader ($M_{\text{low voice}} = 1.70$, $M_{\text{high voice}} = 4.83$, $t(544) = 43.9$, $p < .01$), indicating that our leader voice manipulation was effective. Manipulation check item about the gender of the leader indicated almost all participants (99%) recognized the intended gender of the leader ($\chi^2 = 547.36$, $df = 1$, $p < .01$).

Hypothesis testing. Table 4 and 5 present means by condition of voice self-efficacy and voice and regression results (bootstrap $n = 20,000$), respectively. H1a suggested that female employees will have lower voice self-efficacy than male employees. Supporting H1a, results showed that female participants, in general, demonstrated lower levels of voice self-efficacy than male participants ($M_{\text{male}} = 3.51$, $SD = 1.22$; $M_{\text{female}} = 3.30$, $SD = 1.31$; $F(1, 544) = 4.01$, $p < .05$; $\eta^2 = .01$). H1b suggested that female employees voice less often than male employees due to lower voice self-efficacy. Supporting H1b, indirect effect results indicated that compared to their

male counterparts, female participants were less likely to voice due to lower voice self-efficacy (indirect effect = $-.17$, 95% CI [$-.34$, $-.01$]).

H2a suggested that leader's voice is positively associated with employees' voice self-efficacy. Supporting H2a, participants in the high leader voice condition reported higher voice self-efficacy ($M = 3.99$, $SD = .93$) than in the low leader voice condition ($M = 2.80$, $SD = 1.29$; $F(1, 544) = 155.34$, $p < .01$; $\eta^2 = .22$). This indicated that, in general, participants who are being paired with leaders who voice up, compared to leaders who do not voice up, reported greater self-efficacy. H2b suggested that leader's voice is indirectly (via employees' voice self-efficacy) positively associated with employees' voice. Supporting H2b, there was a significant positive bootstrapped indirect effect of leader's voice on participants willingness to voice via voice self-efficacy (indirect effect = 1.40 , 95% CI [1.16 , 1.64]).

H3a suggested that leader's voice, leader's gender and employees' gender interact such that a female leader's voice, in comparison to a male leader's voice, is more positively associated with female employees' voice self-efficacy. Results indicated the three-way interaction between participant gender, leader gender and leader voice on voice self-efficacy was significant ($b = .83$, $p < .05$; Figure 2a). Planned contrasts indicated that for female participants, there was a significant difference in voice self-efficacy when they were exposed to a gender congruent leader (female; $M = 4.16$, $SD = .79$) than a gender-incongruent leader (male; $M = 3.76$, $SD = 1.07$) who speaks up at work (difference = $.40$, $t(538) = 2.13$, $p < .05$). Hence, H3a was supported.

H3b suggested that leader's voice, leader's gender and employees' gender interact such that a female leader's voice, in comparison to a male leader voice, is more positively *indirectly* associated with female employees' voice (via female employees' voice self-efficacy). Results indicated that the three-way interaction between participant gender, leader gender and leader

voice on participant voice was significant ($b = 1.02$, $p < .05$; Figure 2b). Planned contrasts indicated similar pattern to that of voice self-efficacy. For female participants, there was a significant difference in intentions to voice when they were exposed to a gender congruent leader (female; $M = 4.16$, $SD = .79$) than a gender-incongruent leader (male; $M = 3.74$, $SD = .96$) who speaks up at work (difference = $.42$, $t(538) = 2.32$, $p < .05$). Importantly, for the test of our hypothesis, indirect effects analysis indicated that voice self-efficacy explained these voice differences for women (indirect effect = $.31$, 95% CI [$.07$, $.55$]), supporting H3b.

Interestingly, for male participants, there was no significant difference in voice self-efficacy when they were exposed to a gender congruent leader (male; $M = 4.13$, $SD = .75$) versus a gender incongruent leader (female; $M = 3.93$, $SD = 1.00$) who speaks up at work (difference = $.21$, $t(538) = 1.08$, *n.s.*). Similarly, for such participants, there was no significant difference in intentions to voice when they were exposed to a gender congruent leader (male; $M = 4.01$, $SD = .79$) versus a gender incongruent leader (female; $M = 3.82$, $SD = 1.04$) who speaks up at work (mean difference = $.19$, $t(538) = 1.02$, *n.s.*). An indirect effects analysis indicated that voice self-efficacy did not explain voice differences in men who were exposed to a male rather than a female leader who speaks up at work (indirect effect = $.16$, 95% CI [$-.09$, $.39$]). Moreover, when we examined this issue from another angle, although there were significant improvements in voice self-efficacy of male participants who were in the high leader voice rather than in the low leader voice condition irrespective of the leader's gender (difference in the context of a female leader = $.81$, $p < .05$ versus difference in the context of a male leader = 1.29 , $p < .05$), these differences were not significantly distinct from each other (contrast = $.48$, $p > .05$). All these analyses consistently indicated that exposure to gender congruent leaders who are speak up was not important in explaining voice self-efficacy (and, thereby, voice) differences amongst men.

Robustness tests. To examine the robustness of our model, we conducted additional analysis with regards to other commonly studied predictors of voice psychological safety and voice instrumentality (Morrison, 2011). Psychological safety ($\alpha = .72$) was assessed by an adapted 2-item scale from Edmondson (1999): “I would feel that expressing one’s true feeling would be welcomed in the company” and “I would feel that no one would pick on me in the company even if I have a different opinion”; voice instrumentality ($\alpha = .84$) was assessed by an adapted 2-item scale (e.g. Hussain et al., 2019): “I feel like by speaking up, I would impact decisions in the company” and “I would feel that by speaking up, I would influence the direction of the company” (1 = “extremely unlikely”, 5 = “extremely likely”). Results indicated that participant gender, leader gender and leader voice did not have a three-way interaction effect on psychological safety and voice instrumentality as they did on voice self-efficacy ($p > .05$). This indicated that voice self-efficacy rather than those other antecedents is especially likely to be influenced by gender congruence effects when leaders engage in voice. Moreover, controlling for psychological safety and voice instrumentality, voice self-efficacy continued to predict voice behavior ($p < .01$). In fact, although both psychological safety and voice instrumentality were significantly related to voice ($b_{\text{instrumentality}} = .22, p < .01$; $b_{\text{safety}} = .15, p < .01$), voice self-efficacy was a stronger predictor than either ($p < .01$). Finally, all our mediation (indirect effects) results held controlling for the effects of voice instrumentality and psychological safety on voice.

Additionally, it is possible that the context of our experimental scenario (Engineering) which is a male-dominated setting (Silbey, 2016) made women participants in our Study 2 report lower confidence, in general, in speaking up. To rule that out, we sought to examine whether women participants respond differently about their confidence to speak up in work contexts that

are seen to be stereotypically male-dominated (e.g., Engineering) than in work contexts that are less so (e.g. Nursing; Lane, 2000). To that end, we recruited 400 gender-balanced working adults from Academic Prolific panel platform to participate in a 2 (engineering vs. nursing) x 2 (male participants vs. female participants) experiment in exchange for payment. We excluded 48 participants who failed attention check questions (e.g. “if you are paying attention, please select “Strongly Disagree”). The final sample consists of 367 participants (50.1% male).

The participants were told briefly about their work context (engineering vs. nursing) and asked to adopt the role of an employee in that context who has the opportunity to speak up (see [Online Appendix](#)). In both vignettes, participants read that their team had been working on a project for months and the final presentation is next week. They were told that they had just personally discovered a potential flaw in the team’s deliverable. They were then asked to report their potential confidence in and intentions to speak up about the flaw in that situation using measures of voice self-efficacy and voice intentions similar to those used in Study 2. Across the scenarios, gender had a significant effect on participant voice self-efficacy such that men reported higher voice self-efficacy than did women ($M_{\text{female}} = 5.31$, $SD = 1.44$; $M_{\text{male}} = 5.59$, $SD = 1.15$; $b = -.28$, $p < .05$); Indirect effects analysis indicated that this effect of gender on voice self-efficacy explained lower voice intentions of women in general across scenarios (indirect effect = $-.18$, 95% CI [$-.36$, $-.01$]). To examine whether these effects varied by context, we entered a context dummy variable (0 = engineering, 1 = nursing) as a moderator. The interaction between participant gender and the context dummy variable was not significant ($b = .23$, $p > .10$), indicating that the context (male vs. female dominated) did not impact the gender gap in voice self-efficacy and thereby in voice intentions.

STUDY 2: DISCUSSION

Study 2 supported our theory. Similar to Study 1, we found that: (a) women reported lower voice self-efficacy, and consequently lower voice intentions, than male participants, (b) their voice self-efficacy and thereby voice intentions especially increased when they were exposed to female (rather than male) leaders who spoke up at work, and (c) with regard to voice self-efficacy and voice intentions, men did not respond more positively to male role models than to female role models. Here should note that in Study 1 women reported significantly higher voice self-efficacy only when they worked with vocal female leaders and not male leaders. In slight contrast, in Study 2, although our prediction that women benefit more when paired with female rather than male leader role models was supported, the male leader role models still had a (weaker but) significant impact on women's voice self-efficacy ($p < .05$; see Figure 2a). We discuss the implications of these findings in the general discussion section.

GENERAL DISCUSSION

Drawing on SCT, we demonstrated, across a correlational and an experimental study, that women, compared to men, experience lower voice self-efficacy, which can reduce their voice at the workplace. Moreover, we highlighted that leaders who speak up themselves can act as role models and enhance the voice self-efficacy of their employees. Importantly, across studies, we showed that women develop greater voice self-efficacy and thereby speak up more when they had the opportunity to observe female rather than male leaders voice up. These findings have several conceptual implications that we discuss below.

Theoretical implications

Voice Literature. We highlight that men and women differ in their voice self-efficacy, which impacts their voice levels within organizations. Thereby, we contribute to discussions in the voice literature regarding whether men and women vary in how they experience different factors that hinder speaking up at work. For instance, scholars have suggested (e.g., Detert et al.,

2010), that men and women might not systematically differ in their perceptions of fear of repercussions (psychological safety) or futility (voice instrumentality) in speaking up that often reduce voice. We point out that, in contrast, there are indeed differences in voice self-efficacy that can prevent voice of women from emerging at work. Consequently, we provide precision to the voice literature by delineating voice predictors where gender gaps do exist.

Relatedly, research has reported mixed results on gender differences in voice *behavior* at work (see Morrison, 2011). Although a number of studies have indicated that women speak up less frequently than men (e.g. Lebel & Patil, 2018 Study 2; LePine & Van Dyne, 1998; Liu et al., 2013; Madrid et al., 2015), other studies have not (e.g. Detert & Burris, 2007; Liu et al., 2015; Morrison et al., 2011). One potential explanation is that voice predictors such as psychological safety, voice self-efficacy, and voice instrumentality are differentially important under different circumstances. For instance, studies have noted that lack of psychological safety reduces voice more when personal achievement is salient to employees whereas voice self-efficacy enables employees to voice more when duty to the group is salient (Tangirala et al., 2013). Our findings point out ways in which future research can better predict and test *when* gender differences in voice can occur—that is, in contexts where confidence is especially required on the part of voicers (as women might differ from men with regard to confidence in speaking up but not in terms of feelings of safety or instrumentality).

We also extend voice research by highlighting how leaders can infuse confidence in employees to speak up. The voice literature has extensively studied leadership effects on voice. For instance, it has highlighted that leader behaviors such as transformational leadership and voice solicitation that signal receptivity to change at work can create a sense of psychological safety or voice instrumentality that allow for voice to emerge at work (e.g. Detert & Burris,

2007; Liu et al., 2013, 2017; Sherf et al., 2019; Tangirala & Ramanujam, 2012). However, the literature does not provide clear theoretical guidance on how the voice of the leaders themselves can impact the voice of their employees. In fact, some studies have suggested that more assertive leaders work better with less proactive employees and, by the same token, that more proactive employees find a motivating environment with less assertive leaders—a phenomenon known as *dominance-complementarity* (Carson, 1969; Kiesler, 1983)(see Grant et al., 2011). These studies would suggest that leaders who assertively voice up, might not always create a positive environment for similarly assertive behavior from their employees. We note that this is not necessarily the case. That is, we demonstrate that leaders who speak up can instill self-assurance in employees that they too can do so, which can enhance voice from below. In this process, we highlight why and how leaders, beyond creating a receptive work environment, need to also demonstrate agency themselves to inspire similar agency from employees.

Literature Examining Gender Differences in Agency. We contribute insights to the research on the usefulness of female role models for working women on the frontlines. Although some prior studies have provided supporting evidence for the functional and symbolic value of gender-congruent role models for women (Dasgupta & Asgari, 2004; Lockwood, 2006), many others has suggested that women lower in the organizational hierarchy can get demoralized rather than inspired as the agency demonstrated by their female leaders is often seen as beyond reach (Hoyt & Simon, 2011; Lockwood & Kunda, 1997; Parks-Stamm et al., 2008; Rudman & Phelan, 2010; Suls et al., 2002). This line of finding is consistent with Bandura’s notion that role modeling “is not simply a matter of exposing people to models” (Bandura, 1997, p. 90). Rather, that effective role modeling requires “attentional” processes where the observer needs to find role model’s behavior accessible and translatable (Bandura, 1986). In this regard, we highlight

that women likely recognize that their *immediate* female leaders might face similar challenges as they do when speaking up, and therefore become more willing to pay greater attention to their voice than that of their immediate male leaders. As a result, women can develop greater voice self-efficacy when their immediate leader who is speaking up is also a woman.

Our findings in this regard have several implications for future research, which should examine boundary conditions for the effects found in our studies. For instance, research has indicated that women often dissociate themselves from female leaders who they see as having adopted more masculine methods of operating (Ely, 1994). This indicates that women on the frontlines might not seek to emulate the behavior of their female leaders if they find that their ways of speaking up are distinct from what those women are personally comfortable with (e.g., when it involves interruptive articulations of viewpoints in meetings, etc.). In our studies, we did not explicitly examine whether *the way* in which leaders speak up can make them less or more useful as role models for women on the frontlines. Similarly, it is possible that women in comparison to men might potentially respond better to certain forms of voice role modeling from their leaders. For instance, due to gender role socialization (e.g., Diekmann & Clark, 2015), it is possible that women respond more positively to role modeling of voice directed toward helping disadvantaged others (e.g., speaking up about improving racial biases in hiring practices at the workplace) in comparison to voice that is more focused around helping self (e.g., speaking up about improving work conditions solely for self). Future studies can explore such moderators.

It is worth noting that, in our studies, gender-congruent and incongruent role models seemed to work equally well for men. That is, there was, in general, a main effect of leader voice on voice self-efficacy and thereby on voice; however, men did not particularly speak up more due to higher voice self-efficacy, when paired with male rather than female leaders. Hence,

although supervisory role models who engage in voice were indeed useful to men, the gender of those role models did not behaviorally impact men the same way it did women. One possible explanation for this finding is that men might not confront unique gender-focused hurdles that women face when speaking up (e.g., Karpowitz & Mendelberg, 2014). Hence, symbolically and functionally, they might not have been looking to gender-congruent role models to vicariously learn from at the workplace. Thus, for men, voice might have been equally well enhanced whenever they were paired with leaders (of any gender) who speak up at work.

Our findings also speak to the role men can play as allies at work. Scholars have noted that men need to get more involved in helping organizations attain gender parity on various work outcomes (Joshi et al., 2015; Sherf, et al., 2017). Our paper adds to this discussion by highlighting that gender-congruent role models have more beneficial effects on voice self-efficacy of women on the frontlines. Hence, although allyship of men might be useful for some purposes (e.g., championing for hiring of women; Smith & Johnson, 2016), it might not be as helpful in creating conducive conditions for voices of women to emerge at work. For that to happen, voice role modeling by female leaders might be more effective.

Managerial Implications

Self-assurance in speaking up can critically impact the extent to which employees' voice at work. Such confidence, we point out, can be vicariously developed in employees by leaders who role model speaking up. Thereby, we highlight that it is important for leaders to set the right tone in their teams by engaging in change-oriented communicative behavior themselves when they want to encourage change-oriented participation from employees. Moreover, women constitute a large portion of their workforce especially on the frontlines (International Labour Organization, 2015). They often present novel perspectives that are often overlooked by men,

especially on issues of fairness and employee well-being (Mendelberg et al., 2013), which are important drivers of organizational sustainability. Hence, factors that act to suppress women's voice such as their voice self-efficacy are especially important candidates for managerial attention. In this context, we note that women on the frontlines are particularly attentive to and take cues from how female leaders immediately above them in the organizational hierarchy behave. Hence, our findings imply that presence of female leaders who visibly have a voice in decision making is especially critical if organizations want to encourage women in their workforce to derive greater confidence to speak up.

Limitations and Future Research

Our studies have a number of limitations. First, our field study is vulnerable to common source biases. That is, our independent variable—leader voice—in consonance with our theory, were captured as employees' observations. Further, our dependent variable was also measured from the perspective of the employee. This limitation is somewhat mitigated because (a) we statistically controlled for common source biases in our analyses (via general affectivity; Podsakoff, et al., 2003), (b) our key moderator variable (gender) is unlikely to be influenced by percept-percept inflation, and (c) three-way interactions, such as the ones tested in our model, are not often affected by common source biases (Siemsen et al., 2010). However, future research can address this concern by conducting studies in which voice of employees is more objectively measured (e.g., via trained observers). Additionally, research that employs a longitudinal panel design can help better track changes in employee voice over time as a consequence of leader voice and allow for a stronger test of causal mechanisms.

Second, our experimental study had certain limitations. We employed a vignette in that study. Although vignette-based studies can help unpack the psychology behind work behaviors

(Aguinis & Bradley, 2014), they can lack realism. For instance, rather than examine actual voice behaviors of employees, via that study, we were merely able to investigate voice intentions of participants who reflected on how they would behave in the situation presented by the vignette. Given this, future studies can use experimental approaches in the field to more realistically examine how actual voice behaviors of employees can be enhanced by manipulated leader voice. Additionally, to increase the power of our manipulations and create a clearer contrast, in the experiment, we compared participant reactions to leaders who exhibited *low voice* versus leaders who exhibited *high voice*. A more conservative test would have involved a contrast between a *neutral* condition (where the leader does not refer to his/her voice at all) and a *high voice* condition (where the leader highlights how he/she speaks up). It would be fruitful for research to replicate our findings by investigating our model using such a different design.

Third, although we established gender differences in voice self-efficacy, we did not explicitly examine *when* those differences are more likely to occur. It is possible that they only emerge in male dominated workplaces where women might especially find it difficult to have access to mastery opportunities to enact voice. In that context, our field study was in the context of a range of organizations in India, which has steep inequalities in participation of women in the workforce (Chauradia et al., 2019) and in a putatively masculine-dominated context (i.e., engineering) in the vignette experiment. However, our supplementary studies indicated that in a large scale panel of US-based workers ($n = 1104$), there were no differences in the voice efficacy of women based on reported percentage of women in their organization at different hierarchical levels. Additionally, in a vignette study ($n = 367$), we found that women continued to express lower voice self-efficacy than men irrespective of whether they were asked to imagine themselves in the context of nursing (a female-dominated work context) or in the context of

engineering (a male-dominated work context). These supplementary studies in conjunction with our main findings indicate that gender-based differences in voice efficacy likely occur irrespective of the demographic composition of the workforce in organizations, but potentially remedied when organizations have vocal female leaders who are visible to women on the frontlines. Future research can more systematically delineate contexts where voice self-efficacy gaps between genders might more strongly emerge.

Fourth, our research focused on women's voice in organizations and how women can benefit from gender-congruent role models, it might also be productive for future research to examine whether such effects manifest on other traditionally disadvantaged groups (e.g., racial or ethnic minorities). To this end, future studies can develop theory on specific motivational processes that could be inhibiting voice from other groups and explore interventions that may create a more motivating environment for members of those groups to speak up.

Finally, in our theory, we proposed that women develop greater voice self-efficacy when matched with female rather than male leaders who speak up. In our field study (Study 1), women did not report significantly higher voice self-efficacy when they worked with vocal male leaders and only did so when they worked with vocal female leaders. By contrast, in our experiment (Study 2), although our prediction that women benefit more when paired with female rather than male leader role models was supported, the male leader role models still had a (weaker but still) positive impact on women's voice self-efficacy (see Figure 2a). One possible explanation for this slight discrepancy is that experiments create strong situations where cues pertinent to the manipulation become very salient to participants (e.g. Feldt, 1961). Hence, it is possible that within the minimalist but strong context of our experiment, the participants paid some degree of attention to all leader role models, irrespective of their gender. On the contrary, in our field

study, it is possible that employees had greater cognitive leeway in the amount of consideration they paid to different role models, and responded positively only to female leader role models and not to male leader role models. Another potential explanation is that employees in our field study were based in India, where women are relatively underrepresented in the workforce (Chauradia, et al., 2019). Hence, women in our sample might have been especially looking up to women leaders who speak up and not to male leaders who do so. Future research should explore these possibilities in further depth by examining gender congruence in role modeling effects across work contexts and methodologies to better unpack how they manifest.

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Table 1
Means, Standard Deviations, and Inter-Correlations Among Key Variables^a (Study 1)

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Employee gender ^b	.80	.40														
2. Employee tenure	4.30	4.86	.11*													
3. Employee education ^c	0.44	.50	.02	-.01												
4. Leader gender ^b	.86	.35	.16**	.01												
5. Leader tenure	6.10	5.29	.03	.26**	.00	.50**										
6. Leader's education ^c	1.35	.48	-.20**	.07	-.20**	.18**	.00									
7. Leader's voice	5.30	1.21	.04	-.01	.04	.08	-.01	-.04	(.88)							
8. Voice self-efficacy	5.27	1.14	.12*	.06	-.05	.01	-.01	.03	.35**	(.85)						
9. LMX	5.52	1.11	.07	.03	-.06	.01	-.06	.03	.50**	.22**	(.92)					
10. Psychological safety	4.84	1.00	.02	.03	-.05	-.01	-.05	.05	.41**	.22**	.46**	(.70)				
11. Voice instrumentality	5.04	1.20	.26**	.10	.09	.03	-.05	-.15**	.34**	.25**	.47**	.31**	(.84)			
12. Positive affectivity	5.95	.73	.01	.09	-.04	.07	-.02	-.06	.39**	.27**	.36**	.29**	.34**	(.88)		
13. Negative affectivity	2.88	1.11	.03	.02	.03	.01	-.01	-.09	-.20**	-.17**	-.16**	-.24**	-.16**	-.32**	(.89)	
14. Voice	5.18	1.29	.06	.03	.00	-.02	.03	-.02	.34**	.40**	.12*	.22**	.25**	.32**	-.23**	(.90)

^a Employee $n = 368$. Standardized internal consistency reliability estimates (alphas) appear in parentheses along the diagonal. ^b0 = female, 1 = male
^c0 = Bachelor's degree or below, 1 = Master's degree or above * $p < .05$ ** $p < .01$

Table 2
Study 1: Multi-level Regression Analysis^a (Study 1)

Predictor variable	Voice Self-Efficacy			Voice	
	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	5.28 (.16)**	5.43 (.14)**	5.37 (.13)**	5.11 (.20)**	4.15 (.43)**
<i>Control Variables</i>					
Employee Tenure	-.01 (.02)	-.01 (.02)	-.00 (.02)	.01 (.02)	.00 (.03)
Leader Tenure	-.00 (.01)	-.00 (.01)	-.38 (.17)*	.01 (.02)	.01 (.01)
Psychological Safety	.01 (.05)	.01 (.05)	.01 (.05)	.10 (.06)	.10 (.06)
LMX	.06 (.06)	.06 (.06)	.06 (.07)	-.16 (.07)*	-.17 (.07)*
Voice Instrumentality	.11 (.05)	.12 (.05)*	.12 (.05)	.16 (.07)*	.15 (.07)*
Positive Affectivity	.22 (.10)*	.21 (.09)*	.19 (.09)*	.37 (.13)**	.32 (.12)**
Negative Affectivity	-.08 (.10)	-.09 (.04)	-.10 (.05)*	-.15 (.06)	-.13 (.06)*
<i>Independent Variables</i>					
Employee Gender ^b	.26 (.13)*	.03 (.18)	.10 (.20)	.08 (.15)	-.12 (.15)
Leader Voice	.18 (.09)*	.15 (.23)	.62 (.21)**	.31 (.11)**	.26 (.10)*
Leader Gender ^b	-.22 (.15)	-.42 (.19)*	-.38 (.17)*	.05 (.18)	.02 (.16)
<i>Interaction</i>					
Employee Gender X Leader Voice		.05 (.18)	-.71 (.33)*		
Employee Gender X Leader Gender		.31 (.22)	.25 (.24)		
Leader Gender X Leader Voice		.02 (.27)	-.58 (.29)*		
Employee Gender X Leader Voice X Leader Gender			.93 (.39)*		
<i>Mediator</i>					
Voice Self-Efficacy					.21 (.07)**

^a Employee $n = 362$; Group $n = 131$. Model reflects unstandardized regression coefficients with standard errors in parentheses. Leader voice is group-mean centered. Multi-level modeling used to account for the nested structure of the data. Employee gender, leader's voice and control variables are Level 1 variables and leader's gender is Level 2 variable. ^c0 = female, 1 = male. * $p < .05$ ** $p < .01$

Table 3:

Percentage representation of women at frontline employee, manager/supervisor and the top management levels in the Supplementary Study.

Frontline Employee Level	1: less than 25%	15.3%
	2: 25%-50%	42.7%
	3: 50% - 75%	32.8%
	4: More than 75%	9.2%
Supervisor/Manager Level	1: less than 25%	37.3%
	2: 25%-50%	36.5%
	3: 50% - 75%	17.6%
	4: More than 75%	8.6%
Top Management Level	1: less than 25%	56.1%
	2: 25%-50%	27.1%
	3: 50% - 75%	9.7%
	4: More than 75%	7%

n = 1104 working adults

Table 4*Means by Condition of Voice Self-efficacy and Voice (Study 2: Experimental Vignette Study)*

Participant Gender	Leader Gender	Voice Condition	Voice Self-Efficacy Means and Standard Deviation	Voice Means and Standard Deviations
Male Participant	Male Leader	Low Leader Voice	2.84 (1.33)	2.87 (1.27)
		High Leader Voice	4.13 (0.75)	4.01 (0.79)
	Female Leader	Low Leader Voice	3.12 (1.23)	3.34 (1.13)
		High Leader Voice	3.93 (1.00)	3.82 (1.04)
Female Participant	Male Leader	Low Leader Voice	2.61 (1.34)	2.84 (1.31)
		High Leader Voice	3.76 (1.07)	3.74 (0.96)
	Female Leader	Low Leader Voice	2.65 (1.21)	2.90 (1.25)
		High Leader Voice	4.16 (0.79)	4.16 (0.79)

Table 5
Regression Analysis^a (Study 2)

Predictor variable	Voice Self-Efficacy				Voice		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Intercept	2.84 (.10)*	2.95 (.15)*	2.84 (.16)*	2.90 (.10)*	2.87(.16)**	.67 (.10)*	.67 (.11)**
<i>Independent Variables</i>							
Participant Gender ^b	-.21 (.10)*	-.44 (.19)*	-.24 (.23)	-.10 (.10)	-.04 (.22)	.07 (.06)	.15 (.13)
Leader's Voice Manipulation Dummy ^c	1.19 (.10)**	1.08 (.16)**	1.29 (.19)**	.93 (.10)**	.14 (.18)**	.001 (.07)	.14 (.12)
Leader Gender ^b	.13 (.10)	.06 (.18)	.27 (.22)	.21 (.10)*	.47 (.21)*	.11 (.06)	.26 (.11)*
<i>Interaction</i>							
Participant Gender X Leader Voice		.28 (.19)	-.14 (.28)		-.23 (.27)		-.13 (.16)
Participant Gender X Leader Gender		.19 (.19)	-.23 (.31)		-.41 (.30)		-.23 (.18)
Leader Gender X Leader Voice		-.05 (.19)	-.48 (.26)		-.66 (.26)*		-.29 (.14)*
Participant Gender X Leader Voice X Leader Gender			.83 (.38)*		1.02(.37)**		.37 (.23)
<i>Mediator</i>							
Voice Self-Efficacy						.78 (.03)**	.77 (.03)**
R^2	.23*	.24*	.24*	.16*	.18**	.67*	.69**
ΔR^2		.01	.01		.02	.51	.02

^a Participants $n = 549$. Model reflects unstandardized regression coefficients with standard errors in parentheses ^b 0 = male, 1 = female

^c 0 = low voice condition, 1 = high voice condition * $p < .05$ ** $p < .01$.

Figure 1. Three-Way Interaction on Voice Self-Efficacy (Study 1: Field Study)

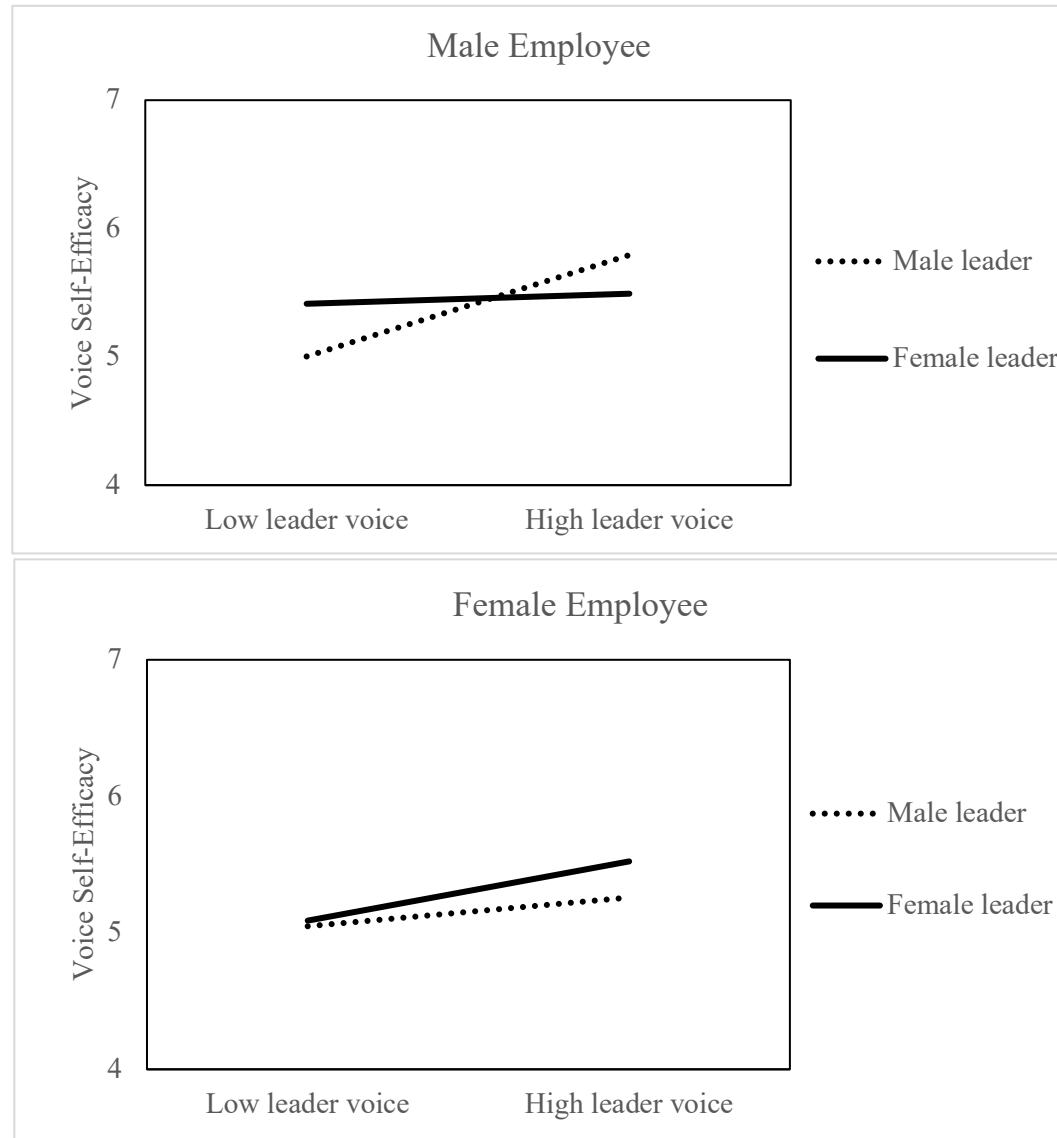


Figure 2a. Three-way interaction on Voice Self-Efficacy (Study 2: Experimental Audio Study)

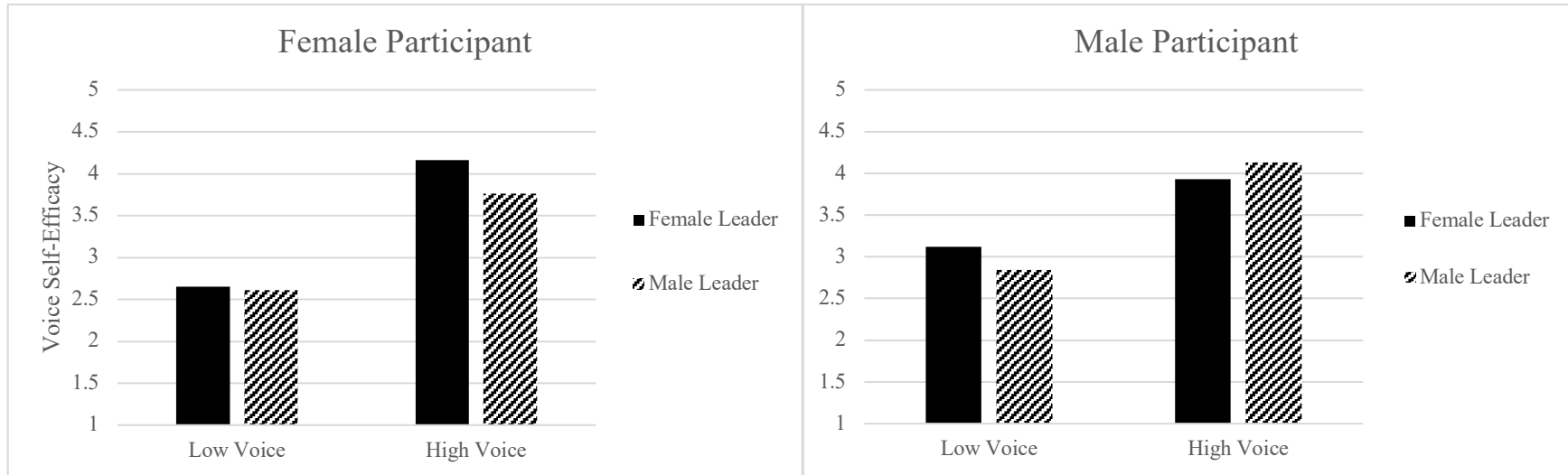
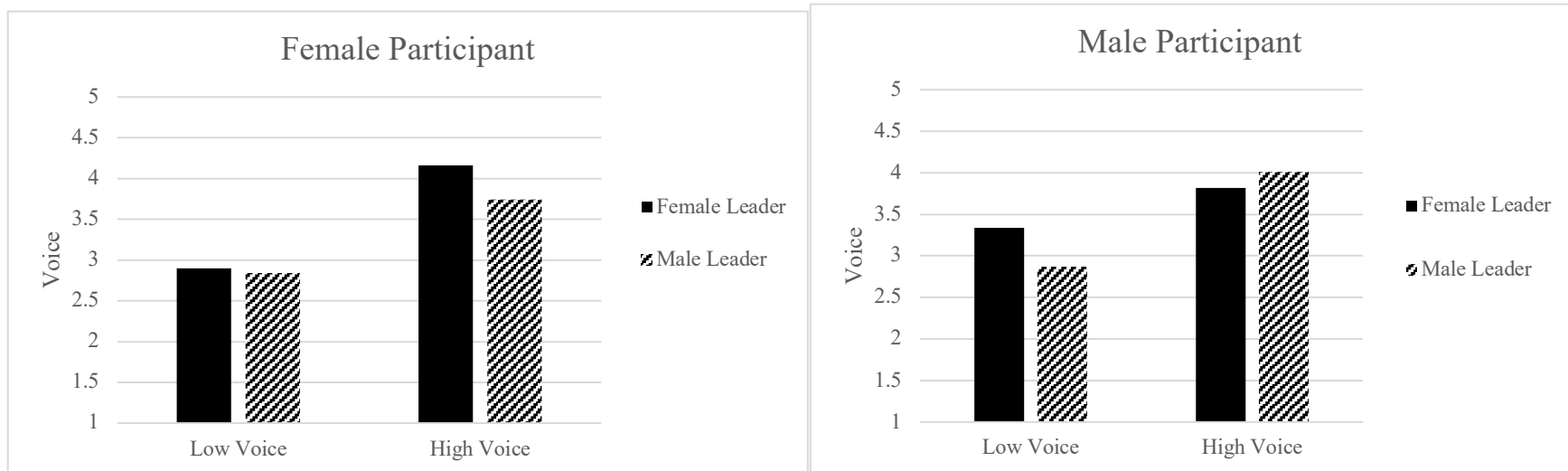


Figure 2b. Three-way interaction on Voice (Study 2: Experimental Audio Study)



APPENDIX A: SCRIPTS USED IN THE STUDY 2

The following scripts were narrated by the leaders in high versus low voice conditions in Study 2 (vignette experiment). The scripts below represent the female leader conditions. In the male leader conditions, the leader name was changed to Michael.

[High Voice Condition, word count: 210]

Hi, my name is Jennifer, and I'm an engineering manager at Hennessey, Simpson & Moore Engineering Group. My team and I work on design and construction of large factories and warehouses.

My team comprises of associate engineers like you. Also, I have to work with my boss, who is a VP in the firm, and other engineering managers on my level.

I think that my boss and colleagues would describe me as a vocal person.

I do believe that there's always room for improvement so I am usually the first one to speak up when I feel that we can do better, or when I feel that we need to prevent something bad from happening. I also do not hesitate to even contradict my boss. For example, recently, the VP was pushing a certain design element for a warehouse. I went to the VP and directly told the person that I think that's a bad idea as it would prove to be too expensive and that there are other cheaper designs that could be used. I did not keep my opinion to myself and directly challenged him. I believe in speaking my mind and make ripples when necessary because I think that's how I can get our work done.

[Low Voice Condition, word count: 214]

Hi, my name is Jennifer, and I'm an engineering manager at Hennessey, Simpson & Moore Engineering Group. My team and I work on design and construction of large factories and warehouses.

My team comprises of associate engineers like you. Also, I have to work with my boss, who is a VP in the firm, and other engineering managers on my level.

I think that my boss and colleagues would describe me as a person of few words.

I do believe that there's always room for improvement, but I am usually not the one to speak up when I feel that we can do better, or when I feel that we need to prevent something bad from happening. I also do not contradict my boss. For example, recently, the VP was pushing a certain design element for a warehouse. I could have gone to the VP and told the person that I think that's a bad idea as it would prove to be too expensive and that there are other cheaper designs that could be used. However, I kept my opinion to myself and did not directly challenge him. I exercise patience and am frequently silent with my opinions, and stay under the radar because I think that's how I can get our work done.