

Led by Curiosity and Responding with Voice: The Influence of Leader Displays of Curiosity and Leader Gender on Follower Reactions of Psychological Safety and Voice

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Abstract

How curiosity affects other employees—the social side of curiosity at work—is understudied but meaningful given that social learning theory suggests that when leaders display curiosity, it signals to followers that the environment is safe for taking risks associated with being inquisitive at work. At the same time, because displays of curiosity are communal in nature, social role theory and the communality-bonus effect combine to indicate that curiosity's effects should be stronger for followers of male leaders versus followers of female leaders. Here, we integrate these social theories to explain how and when leader displays of curiosity will increase follower perceptions of psychological safety and subsequent voice. We test and find support for these predictions across four samples of leader-follower dyads, thereby broadening our understanding of the social implications of curiosity at work, demonstrating how curiosity contributes to leader effectiveness, and highlighting how gender shapes the effects of curiosity.

Keywords: Curiosity at work, Leader-follower dynamics, Psychological safety, Leader gender, Voice

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In recent years, the popular business press has portrayed curiosity as indispensable for leaders. In articles, curiosity has been described not only as “essential” (Ready, 2019) and “transformative” (Malik, 2020) for leaders, but also “the most valuable leadership trait you can have” (Yakowicz, 2015, p. 1). Given these reports of the power of curiosity for leaders, one might assume that organizational researchers have likewise provided robust evidence of the positive effects of leader displays of curiosity. That assumption would be partly correct, given that researchers have studied curiosity—“the desire to know, to see, or to experience that motivates exploratory behavior, information seeking and learning” (Berlyne, 1954; Lievens et al., 2022, p. 179; Litman, 2005; Loewenstein, 1994; Mussel, 2013a)—for some time. The findings from this stream of research indicate that employees’ curiosity positively relates to their learning, problem solving, personal growth, and engagement while reducing their burnout (Hardy et al., 2017; Kashdan et al., 2020; Kashdan et al., 2004). In addition, curiosity contributes to employees’ ratings of task (Mussel, 2013b; Reio Jr. & Wiswell, 2000), technical (Reio Jr. & Wiswell, 2000), and creative performance (Hardy et al., 2017). Despite this progress in uncovering antecedents and consequences of curiosity for individual employees, the aforementioned assumption would also be partly incorrect because research has only begun to move beyond employees and examine how leader displays of curiosity are experienced by other organizational members.

The dearth of research on the effects of leader displays of curiosity is noteworthy not merely because it could substantiate popular claims that curiosity may be a superpower for leaders, but because of the social nature of leadership. That is, leader behavior affects followers

Effects of Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice (Judge & Piccolo, 2004), and so leader displays of curiosity likely not only affect their own learning and behavior, but may also impact how followers feel and perform at work. Therefore, even if the demonstrated effects of employee curiosity generalize to leaders, our understanding of the effects of curiosity for leaders is still incomplete, because it is unclear how followers respond when they see such behavior from their leaders. This incompleteness is particularly meaningful in light of theory suggesting that how and when leader displays of curiosity affect followers is nuanced (e.g., Browning et al., 1995; Evans, 2020; Griffin & Grote, 2020). To understand this nuance, we take a social perspective on curiosity to examine how followers respond to their leaders' displays of curiosity by engaging in behaviors such as learning, exploring, and seeking information (Mussel et al., 2012). Briefly, displaying curiosity at work can be risky because of its potential to be disruptive and upset the status quo (Lievens et al., 2022). Per the tenets of social learning theory (Bandura, 1977), then, when leaders exhibit curiosity, they model to their followers that the work context is safe for questioning, learning, and exploring (e.g., Hirak et al., 2012; Newman et al., 2017, p. 525; Walumbwa & Schaubroeck, 2009). Social learning theory goes on to propose that this modeling will cause a positive cognitive shift in how followers view the displayed behavior (Davis & Luthans, 1980). Displays of curiosity by leaders should therefore positively affect followers' perceptions that it is psychologically safe to take risks related to being inquisitive at work, such as asking challenging questions (Edmondson, 1999).

While social learning theory clarifies why displays of curiosity should give followers a stronger sense that the work setting is psychologically safe, social role theory supplies additional nuance to this process. This nuance relates to the fact that outside of the work domain, curiosity has increasingly been shown to have interpersonal effects, namely that it strengthens relational

Effects of Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice bonds between those who display it and those who observe these displays (Kashdan & Silvia, 2009). Therefore, researchers have increasingly viewed curiosity as a communal form of behavior (Menning, 2019). When viewed through this communal lens, social role theory (Eagly, 1987; Eagly & Wood, 2012) indicates that the effects of leader displays of curiosity on followers may differ depending on leader gender. Specifically, there are higher expectations for women than for men to act communally in the workplace (Allen, 2006; Allen & Rush, 2001), and women tend to behave more communally than men in the workplace (Eagly, 1987; Kidder, 2002). As such, when female workers engage in communal behaviors they tend to be rewarded less because these behaviors are consistent with their expected gender roles and are thus less influential (e.g., Heilman & Chen, 2005). However, when men engage in communal behaviors at work, they tend to receive a so-called *communality bonus* because these behaviors are positive yet not consistent with their prescribed gender roles, thus making their communality more influential (Bettencourt et al., 1997; Hentschel et al., 2018). So while male displays of curiosity violate the expectations of those who observe it, the communal nature of the behavior will cause it to be interpreted as a positive violation, leading to a social bonus from others (Prentice & Carranza, 2004). When female leaders display curiosity, there is no violation, so any effects on followers should be weaker than when male leaders similarly exhibit curiosity. In short, the psychological safety-based effects of leader curiosity on followers' may depend not only on the behavior itself, but on who is enacting it, in terms of their gender.

And what is the ultimate effect of leader displays of curiosity on followers? Returning to social learning theory, displays of leader curiosity, which include challenging existing theories and searching for new solutions to old problems (Griffin & Grote, 2020), should not only make followers feel that it is safe to take risks, but encourage them to emulate such status-quo

Effects of Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice questioning behavior (i.e., follower voice; Van Dyne & LePine, 1998). Therefore, the real impact of displayed curiosity by leaders may lie in its effects on follower voice, via psychological safety. If so, displays of curiosity by male leaders may lead to increased follower psychological safety and, in turn, more follower voice, whereas similar displays by female leaders may not elicit the same depth of psychological safety in their followers, relating to relatively less follower voice, as well. These curiosity-based effects take on added importance in light of research showing that employee voice can drive higher unit performance (Detert et al., 2013).

The purpose of the present study is to further shift the focus of the study of curiosity in organizations toward a more social perspective by examining how and when displays of curiosity by leaders will increase followers' perceptions of psychological safety, thereby driving subsequent engagement in follower voice. Our full theoretical model is shown in Figure 1, which we test using four independent samples of leader-follower dyads collected across three time points to fully test the extent to which our findings are robust, rather than artifactual (e.g., Freese & Peterson, 2017; Köhler & Cortina, 2021). The development and empirical testing of this model contributes to our understanding of the dynamics of curiosity, leadership, and gender in the workplace, in meaningful ways. First, the study of curiosity at work has tended to focus on its effects on those who possess it or engage in it (Lievens et al., 2022). While this focus has been generative, our application of social learning theory shows that in the case of leaders, curiosity's effects extend beyond the enactor of the behavior and have social implications. In doing so, we broaden the current focus of the effects of curiosity at work to include its social side, namely how other organizational members respond to curiosity. Second, there is currently a disconnect between popular claims of the importance of curiosity for leaders and evidence of this importance. Our paper contributes to closing this divide as it pertains to the extent to which

displaying curiosity has effects on followers, by showing that such displays not only affect how followers think (i.e., psychological safety) but also how they behave (i.e., voice). In doing so, we answer the “so what?” question when it comes to leader displays of curiosity by showing they have meaningful effects on a critical follower behavior—speaking up at work. Third, by situating displays of curiosity as communal behavior and drawing from social role theory and the male communality-bonus literature to show how the effects of curiosity may differ based on who performs it, we highlight an important gender-based boundary condition when it comes to displaying curiosity at work. In doing so, we extend the communality-bonus literature by showing that behaviors that may not appear communal on the surface but are ultimately communal in nature (e.g., displays of curiosity) can provide a positive bonus in the eyes of others. This is meaningful given that it indicates that to fully understand the effects of curiosity at work, it is critical to consider the characteristics of those who display it.

Figure 1 about here

A Social Perspective on Leader Displays of Curiosity

Within the organizational literature, curiosity is conceptualized as a force that drives a set of behaviors associated with seeking, questioning, collecting, and learning information and knowledge (Lievens et al., 2022). These behaviors are visible manifestations of curiosity (Mussel et al., 2012) such that rather than representing curiosity itself, behavior such as questioning and learning can be thought of as the outward displays of curiosity. From a social perspective, when others observe these behaviors, they should attribute their enactment to curiosity within the individual who performs them (e.g., Berlyne, 1960; Spilka et al., 1985). And in the context of leader-follower dyads, this means that when leaders engage in learning, questioning, exploring,

and so forth related to information and knowledge, followers should associate these behaviors with curiosity. Moreover, according to social learning theory, when followers observe their leaders displaying curiosity, they will learn from these displays.

Social learning theory posits that individuals can learn virtually anything via observational experience, simply by observing others' behavior and the consequences of that behavior (Bandura, 1973, 1977; Brown et al., 2005). This theory is particularly germane to the context of leadership because of the influence that leaders possess over followers (Wood & Bandura, 1989; Yukl, 2002). Thus, when followers observe leader behaviors, the tenets of social learning theory are especially useful, because followers should be particularly likely to see the behavior of their leaders as educational in terms of that which is desired, causing them to learn and mimic that behavior (Mawritz et al., 2012; Wood & Bandura, 1989). According to social learning theory, followers should not only see leader displays of curiosity as evidence that their leader is curious, but also view them as instructive of a type of behavior that is valued by their leader (Bandura, 1977; Brown et al., 2005). In doing so, seeing leader displays of curiosity will cause followers to shift their cognitive evaluation of the appropriateness of curiosity in a given work context (Davis & Luthans, 1980). This social learning process has also been described as a process wherein leaders are seen as role models by followers, and therefore followers come to perceive workplace behaviors as more acceptable to the extent to which they see leaders engage in them (Brown & Treviño, 2014; Yaffe & Kark, 2011).

In terms of how displays of curiosity by leaders may shift the way that followers view curiosity, it is important to note that displaying curiosity in the workplace is not without risk. Curiosity-driven behavior such as exploring new solutions to problems can lead to failure, and questioning established knowledge could lead to the perception of being a difficult or peculiar

Effects of Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice employee (Lievens et al., 2022). Per social learning theory, then, followers should interpret leaders' displays of curiosity as signals that taking risks at work is welcome. This reduction in the perceived riskiness of being inquisitive at work as a result of seeing leaders display curiosity should be reflected in an increase in perceptions of psychological safety in the minds of followers. Psychological safety refers to the perception that it is safe to take interpersonal risks at work (Edmondson, 1999; Edmondson & Lei, 2014). In alignment with this assertion, Edmondson and Mogelof (2005) proposed that followers of leaders who are naturally curious should experience increased levels of psychological safety, and Delizonna (2017) suggested that curiosity represents one way to create psychological safety in the workplace. Moreover, prior research has shown that by being open and improvement oriented, leaders model to followers that the workplace is safe for risk taking (e.g., Hirak et al., 2012; Newman et al., 2017; Walumbwa & Schaubroeck, 2009). Therefore, when followers observe leader displays of curiosity, they should interpret these leader acts as a sign that the climate is safe for asking questions and seeking out new information.

Hypothesis 1: Leader displays of curiosity will positively relate to follower perceptions of psychological safety.

Beyond affecting how followers feel in the wake of leader behaviors, social learning theory goes on to predict that follower perceptions stemming from leader behavior will inform how followers act in the future (Bandura, 1977; Wu et al., 2021). It stands to reason that when followers feel psychologically safe as a result of seeing their leaders asking questions and seeking out new knowledge, this safety will, in turn, psychologically free them to display inquisitiveness as well, such as by speaking up and asking questions that they may otherwise keep to themselves (Li et al., 2014). In the workplace, such status quo-challenging questions are

representative of voice—a risky type of organizational citizenship behavior that challenges the status quo in order to improve organizational effectiveness (Van Dyne & LePine, 1998).

The prediction that leader displays of curiosity will lead to follower voice via psychological safety not only aligns with social learning theory, but also with prior research showing that when leaders signal that they are open to new ideas, followers observing this approach tend to feel psychologically safe and, in turn, speak up more to improve organizational effectiveness (i.e., voice; Detert & Burris, 2007). Regarding curiosity in particular, Kolbe et al. (2015) suggested that leaders who display curiosity create psychological safety for their followers who should then feel motivated to take action. Together, the tenets of social learning theory and prior research converge to suggest that when leaders display curiosity, it will enhance follower psychological safety and, in turn, follower voice.

Hypothesis 2: Follower perceptions of psychological safety will mediate the positive relationship between leader displays of curiosity and follower voice.

The Influence of Gender on the Effects of Leader Displays of Curiosity

Up to this point, our arguments have operated under the assumption that followers respond to all leader displays of curiosity in the same manner. However, as we explain next, displays of curiosity are experienced by others as communal behavior, and because of that, social role theory suggests that this assumption may not be tenable (Eagly, 1983, 1987; Eagly et al., 2000). First, displays of curiosity should be perceived by others as communal in nature because communal behaviors are those that signal concern for others, friendliness, and unselfishness while contributing to the development of positive social connections and social capital (Au, 2019; Eagly & Wood, 1991, 2012). Although it has not always been studied as such, researchers have increasingly come to view curiosity as communal in nature (Bloom, 2021; Menning, 2019). This understanding has stemmed not only from observations that curiosity is commonly

expressed in the context of close relationships, but also from findings that the behavior contributes to the development of meaningful social connections to others (Kashdan & Silvia, 2009) and to the creation of social capital for both those who enact curiosity and those who receive it (Kashdan et al., 2011). Further, Nadelson et al. (2019) argued that caring and showing empathy for others, two key communal behaviors (Clark & Mills, 1979, 1993; Clark & Mills, 2012), are inherent to curiosity (i.e., empathetic curiosity). In sum, when expressed in the presence of others, curiosity can be conceptualized as a form of communal behavior.

Social role theory deals directly with communal (and agentic) behaviors, and proposes that because gender differences are the result of societal power relations and social learning processes (Eagly & Wood, 2012; House, 1981), gender-congruent behaviors are learned, performed, and reinforced via social power and status structures (e.g., Eagly & Koenig, 2006; Kidder, 2002; Ridgeway, 2001). More specifically, the theory describes how the gendered division of labor in society produces gender roles and related stereotypes that dictate the kind of behavior generally aligned with, and expected from, people based on their biological sex (Eagly, 1983; Eagly & Wood, 2012). As a result, people tend to take on gender roles based on how they view the world and behave in ways that are congruent with the societal norms associated with these roles (Hentschel et al., 2019; Maccoby, 1990). Women have historically held helping roles (both in terms of familial roles as well as work roles, such as nursing and teaching), which have led to generalized communal expectations such as being open, caring, and curious (Heilman & Chen, 2005; Heilman & Wallen, 2010; Prentice & Carranza, 2002). In contrast, men have traditionally held roles associated with power and are therefore ascribed more agentic characteristics (e.g., assertiveness, certainty), such that expectations for men in leadership

translate to agentic styles of leadership that rely on certainty and confidence (Heilman, 2001; Rudman & Glick, 2001; Scott & Brown, 2006).

Extending social role theory, Eagly and Karau (2002) developed role congruity theory, which proposes that female and male leaders face different consequences when their behavior is incongruent with their expected gender roles. Research supports this assertion, indicating that gender stereotyping not only affects expectations for female leaders to perform communal behaviors, but it also makes these leaders' communal behavior less noticed and valued by others (e.g., Chiaburu et al., 2014; Kark & Waismel-Manor, 2005). This theoretical extension of social role theory and these findings suggest that female leaders' displays of curiosity may often go unacknowledged by followers. However, the opposite often holds when male leaders engage in communal behavior. The tenets of another theory adjacent to social role theory—expectancy violations theory (Burgoon & Jones, 1976)—suggest that employees who perform counterstereotypical but positive behaviors will be viewed more favorably than their colleagues for whom the behavior is seen as stereotypical because it violates gender role expectations (Bettencourt et al., 1997; Hentschel et al., 2018). This aligns with the research of Shaughnessy et al. (2015), who found that when male negotiators engaged in small talk (a communal behavior), they were viewed more favorably than female negotiators who did the same thing.

Violating a stereotype in a positive way also tends to have a positive effect on leader evaluations (e.g., Jussim et al., 1987). Moreover, behaving communally positively affects male employees' career outcomes (Krstic & Hideg, 2019), suggesting that, for men, behaving communally is a positive stereotype. Further, Hentschel et al. (2018) proposed that male leaders' counterstereotypical communal behaviors are more noticeable, and as a result more impactful, than the communal behaviors of female leaders (i.e., the male communality bonus). Regarding

this impact, and in alignment with social learning theory, research has gone on to show that the effects of positive stereotype violations by leaders extend beyond followers' evaluations of leaders, to the behaviors of followers themselves. Indeed, one study found that transformational leadership led to increased innovative behavior in followers, but the effects were significantly stronger for male leaders than for female leaders (Reuvers et al., 2008).

Taken together, violation of a positive stereotype, such as male leaders behaving communally (Krstic & Hideg, 2019), can have a strong, positive influence on leader-influenced outcomes relative to confirming a stereotype, such as female leaders behaving communally. Applied to leader displays of curiosity, this means that the behavior's proposed positive effects on follower psychological safety should be amplified when leaders are male. Conversely, for female leaders, displays of curiosity are less likely to be noticed, thereby attenuating the positive effects of this behavior on follower psychological safety.

Hypothesis 3: The relationship between leader displays of curiosity and follower perceptions of psychological safety will be moderated by leader gender, such that this relationship will be stronger for followers of male leaders than for followers of female leaders.

Integrating our theoretical arguments related to the moderating role of gender and the mediating role of psychological safety, we predict a pattern of first-stage moderated-mediation (Edwards & Lambert, 2007; Hayes, 2013). Specifically, for male leaders (compared to female leaders), displays of curiosity should not only lead to greater psychological safety among followers, but increased follower voice as well.

Hypothesis 4: The indirect effect of leader displays of curiosity on follower voice via follower perceptions of psychological safety will be stronger for followers of male leaders than for followers of female leaders.

Methods

Sample and Procedures

Effects of Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice

We tested our entire theoretical model in four distinct organizational samples in order to examine the replicability and generalizability of our findings (e.g., Köhler & Cortina, 2021; Schmidt, 2009). Specifically, we surveyed leader-follower dyads in four firms across multiple industries located in the Midwestern and Southeastern regions of the United States. Sample 1 consisted of employees of an educational consulting firm (leaders: 36% female, 76% White, $m_{age} = 42$ years, 31% had a Master's degree; followers: 33% female, 71% White, $m_{age} = 38$ years old; 17% had a Master's degree; 82% response rate). Sample 2 (leaders: 35% female, 73% White, $m_{age} = 44$ years, 82% had a Master's or Professional medical degree (e.g., MD, Nurse Practitioner); followers: 53% female, 64% White, $m_{age} = 37$ years, 57% had a Master's or Professional degree; 71% response rate) and Sample 3 (leaders: 36% female, 67% White, $m_{age} = 45$ years, 59% had a Master's or Professional degree; followers: 47% female, 74% White, $m_{age} = 41$ years, 26% had a Master's or Professional degree; 74% response rate) consisted of employees of two different healthcare organizations. Sample 4 consisted of employees of a financial services organization (leaders: 43% female, 68% White, $m_{age} = 44$ years, 36% had a Master's degree; followers: 47% female, 51% White, $m_{age} = 33$ years, 18% had a Master's degree; 70% response rate). Data collection procedures were identical for all four samples. Methodologists have encouraged researchers to adopt such multi-sample approaches to increase the confidence that findings are robust and generalizable instead of artifactual (e.g., Köhler & Cortina, 2021; Schmidt, 2009; Thompson et al., 2020). To reduce common method concerns, we collected data in three waves each separated by seven weeks. At Time 1, we collected follower reports of leader displays of curiosity. At Time 2 (seven weeks later), we collected follower psychological safety from followers. At Time 3 (seven weeks later), we collected leader ratings of follower voice.

Measures

Participants responded to all survey items using a seven-point Likert type scale ranging from strongly disagree (1) to strongly agree (7).

Leader displays of curiosity. Most existing measures of curiosity are not work related (Mussel et al., 2012). Therefore, similar to past research examining the relationship between workplace curiosity and job performance (e.g., Mussel, 2013b), we used six items from Mussel et al.'s (2012) ten-item work-related self-curiosity scale. We asked followers to rate their leaders' displayed curiosity, adapting the scale such that the referent would assess curiosity displays by the leader instead of self-curiosity. Due to this referent shift from self to leader, we excluded four items that assessed referent thoughts (e.g., "I enjoy pondering and thinking" and "I keep thinking about a problem until I've solved it") because followers do not have access to leader cognitions and these do not represent outward displays of curiosity. A sample item was "When confronted with complex problems, my manager likes to look for new solutions."

Because we adapted this scale to measure leader displays of curiosity using follower reports, we conducted a confirmatory factor analysis (CFA) to see if the six amended items load onto a single latent factor and had good fit with our data. We surveyed employees of a healthcare organization located in the Midwestern United States. We received 187 completed surveys (sample 5, response rate = 79%, 43% female). As indicated in Table 1, the results of the CFA revealed acceptable fit for a latent single factor model (comparative fit index [CFI] = .99, goodness-of-fit [GFI] = .98, root mean square effort of approximation [RMSEA] = .05, and standardized root mean square residual [SRMR] = .02) and the individual factor loadings for all six items exceeded the .60 threshold (Kline, 2015). A complete list of the 6 items used is in Table 1.

Follower perceptions of psychological safety. Similar to past research examining individual-level (i.e., perceived) psychological safety (e.g., Burris et al., 2008; Detert & Burris, 2007), we measured follower perceptions of psychological safety using three items from Edmondson's (1999) team-level scale. A sample item was "It is safe for me to make suggestions."

Follower voice. Leaders rated followers' voice behavior using Van Dyne and LePine's (1998) six-item scale. A sample item was "Speaks up in their workgroup with ideas for new projects or changes in procedures."

Control variables¹. We controlled for four variables that past research has found to be related to variables of interest in the present research. We controlled for *follower gender* and *dyadic tenure* because studies have found that these variables influence employee perceptions, psychological safety, and voice (Lee et al., 2018; Thompson et al., 2020; Wang et al., 2017). We also controlled for *leader creativity* (i.e., the extent to which leaders perform creative behaviors or suggest ideas, [Zhou & George, 2001]) and *role innovation* (i.e., how differently leaders perform their roles compared to those who currently or previously held the same roles [West, 1987]), because past research has found that these variables relate to curiosity (e.g., Hagtvedt et al., 2019; Nowotny, 2010; Pusca & Northwood, 2018)². Similar to past research (e.g., Baer & Oldham, 2006; Thompson & Bolino, 2018), we used a shortened four-item version of Zhou and George's (2001) scale to measure leader creativity (Sample item: "My manager suggests creative

¹ In a separate set of analyses, we tested all hypotheses (in all samples) without control variables and using structural equation modeling (SEM). Regardless of the absence of control variables or the analytic technique used (e.g., SEM, PROCESS), our results were consistent with those presented in the results. The results of these analyses are available upon request.

² Given the noted theoretical similarities between leader displays of curiosity, creativity, and innovation, we conducted a set of CFAs. The results indicated acceptable fit and support the distinctiveness of leader displays of curiosity, leader creativity, and leader innovation in our data (Sample 1: CFI=.97, TLI=.97, RMSEA=.06, SRMR=.03; Sample 2: CFI=.98, TLI=.97, RMSEA=.07, SRMR=.03; Sample 3: CFI=.97, TLI=.96, RMSEA=.07, SRMR=.03; Sample 4: CFI=.99, TLI=.98, RMSEA=.05, SRMR=.03).

Effects of Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice ideas that might improve working conditions at our organization”). We used West’s (1987) six-item scale to measure leader role innovation (Sample item: “My manager develops innovative ways of accomplishing tasks/objectives differently than others who have done this job in the past or present”).

Results^{3,4}

Tables 2 and 3 show the descriptive statistics, zero-order correlations, and reliabilities for all measures in all four samples. We first tested Hypothesis 1 which predicted that leader displays of curiosity would positively relate to follower psychological safety. Specifically, we used multiple regression analyses (Aiken & West, 1991) and found that leader displays of curiosity positively related to follower psychological safety in all four samples (see Table 4). Next, we examined Hypothesis 2 which predicted that follower psychological safety would mediate the positive relationship between leader displays of curiosity and follower voice. To test Hypothesis 2, we conducted simple mediation analyses using the procedures set forth by Preacher and Hayes (2004, 2008). We estimated the indirect effect using unstandardized coefficients and bootstrapping procedures with 10,000 resamples, confirming evidence of mediation if the 95% confidence intervals (CI) exclude zero. In support of Hypothesis 2, we

³ Due to the number of samples and to reduce redundancy, all statistics related to hypotheses testing are reported in tables and not in the body of the manuscript.

⁴ For all samples we tested for possible nesting effects (i.e., some leaders provided voice ratings for multiple respondents), investigated common method variance by controlling for the effects of an unmeasured latent methods factor, and calculated variance inflation factors (VIF). For all samples, our results supported the following: (1) based on ICC(1) and ICC(2), the values were in acceptable ranges (ICC[1]s were all less than .02 and ICC[2]s were all less than .27), signifying that the leader ratings were adequately independent and did not significantly influence the results (see Bliese, 2000; LeBreton & Senter, 2008 for guidelines); and (2) common method variance was within acceptable ranges (less than a .10 change for all items after controlling for the effects of an unmeasured latent methods factor) suggesting that common method bias was not a concern (see MacKenzie et al., 1999; Podsakoff et al., 2003; Podsakoff et al., 2012 for guidelines). The VIF values for all study variables were lower than 2.00, well below the 10.00 threshold that indicates the presence of multicollinearity. Full reports of these tests are available from the first author.

found that follower psychological safety mediated the relationship between leader displays of curiosity and follower voice in all four samples (see Table 5).

We used moderated multiple regression (Cohen et al., 2003) and simple slopes analyses (Aiken & West, 1991) to test Hypothesis 3, which predicted that the positive relationship between leader displays of curiosity and follower psychological safety would be moderated by leader gender, such that this relationship will be stronger for followers of male leaders than for followers of female leaders. As reported in Table 6, the effect of the interaction of leader displays of curiosity and gender on follower psychological safety was significant and positive across all samples. Further, simple slopes analyses revealed that the slope of the relationship between leader displays of curiosity and follower psychological safety relationship was stronger for followers of male leaders than for followers of female leaders in all four samples (see Figures 2-5 and Table 7). Taken together, Hypothesis 3 received full support. Finally, we tested Hypothesis 4, which proposed that the relationship between leader displays of curiosity and follower voice through psychological safety would be stronger for followers of male leaders than for followers of female leaders. To examine this prediction, we estimated the conditional indirect effect via Hayes' (2019) PROCESS SPSS macro and calculated index of moderated-mediation (mod-med) coefficients (Hayes, 2015) with bootstrapping procedures with 10,000 resamples. As shown in Table 5, the significant moderated-mediation coefficients indicate that the indirect effect of leader displays of curiosity on follower voice via follower psychological safety was conditional upon leader gender such that this indirect effect was significant for when leaders were male, but not when leaders were female. Thus, Hypothesis 4 was supported. Full analyses outputs are available on OSF (https://osf.io/9ngkx/?view_only=76d0bec08c184a51a795db0300a85875).

Tables 1-7 and Figures 2-6 about here

Supplemental Analyses

Although our theoretical interest was centered on the mediating role that psychological safety played in the relationship between leader displays of curiosity and follower voice, we also examined if (1) leader displays of curiosity directly related to follower voice and if (2) leader gender moderated this relationship, to gain a more complete understanding of the relationship between leader displays of curiosity and follower voice primarily to aid future research. Further, the results of our tests of Hypothesis 4 suggest that psychological safety mediated the effect of leader displays of curiosity on voice for followers of male leaders, but generally not for those of female leaders. This raises the question of whether the direct effect of this relationship was significant for followers of both male and female leaders. Past research suggests that other variables (e.g., commitment, intention to leave; Burris et al., 2008), in addition to psychological safety, mediate the relationship between antecedent variables and follower voice. As such, there may be a direct effect moderation explained by unmeasured mediating variables not relevant to the present research (Edwards & Lambert, 2007). In testing these unmediated effects, we found that leader displays of curiosity positively related to follower voice (see Table 4). As indicated in Table 5, the effect of the interaction of leader displays of curiosity and leader gender on follower voice was positive and significant in all four samples. Further, simple slopes analyses indicate that the slopes were again stronger for followers of male leaders relative to followers of female leaders, in all four samples (see Tables 6-7 and Figure 6 for a representative moderation plot). These supplementary results indicate that for followers of female leaders, the relationship between leader displays of curiosity and follower voice may be mediated by an unmeasured variable. We discuss the implications of this finding in the discussion section.

Discussion

Based on the statements made by writers of the popular business press, curiosity is associated with positive outcomes for leaders. However, these assertions of the value of displaying curiosity for leaders have largely gone untested, which is particularly important given that it is unclear how followers will react to such behavior from their leader. The purpose of the present research was to examine the social side of curiosity at work by developing and testing a theoretical model explaining how leader displays of curiosity affect followers. To do so, we examined curiosity through a social learning lens to theorize that leader displays of curiosity will increase followers' perceptions that the work context is safe for asking questions and seeking out new information, which can sometimes be risky in the work domain. Based further on social learning theory, we went on to explain how this positive cognitive shift in follower psychological safety will drive subsequent voice behavior, which like displays of curiosity is not without risk for employees. We then integrated this social learning perspective with that of social role theory to identify a potential boundary condition of the effects of leader displays of curiosity on follower psychological safety and voice—leader gender. In testing the resulting theoretical model across four samples, we found that the positive effect of leader displays of curiosity on follower psychological safety was stronger for followers of male leaders (relative to followers of female leaders), and that the indirect effect of leader displays of curiosity on follower voice via follower psychological safety was stronger for followers of male leaders than for followers of female leaders. These findings meaningfully extend our current understanding of curiosity, leadership, and gender at work in multiple ways.

Theoretical Implications

To date, the study of curiosity within organizations has largely been focused on the nature of the construct, and its effects for those who possess it or engage in it. While this focus

has been fruitful, its narrowness has led scholars to call for research that examines the many different roles that curiosity plays in organizational settings (Harrison et al., 2020). This paper answers that call by focusing on the social role that curiosity plays at work. Given that curiosity is most often conceptualized as a drive or psychological state within individuals, it stands to reason that researchers have primarily focused on the consequences of curiosity of those who possess it. With that foundation firmly in place, however, this paper directed its focus on the behavioral manifestations of curiosity, and how others respond to them. In drawing from social learning and social role theories, this paper shows that to fully understand the dynamics of curiosity at work, its social implications must be considered.

Second, our model and findings shift the study of the effects of curiosity at work up one echelon, to uncover the implications of *leader* displays of curiosity on followers. Doing so represents an extension of the current literature that takes on added importance given that there is currently a dearth of evidence to support or cast doubt upon the many claims in the broader business press that curiosity is associated with leader effectiveness. This paper not only provides theoretical rationale for why displaying curiosity can be considered a positive component of effective leadership, but it shows the follower-based consequences through which this effectiveness may be realized. That is, we show that leader displays of curiosity not only have a positive impact on how followers feel in terms of their psychological safety, but that these feelings fuel subsequent voice behavior, which is valued in most organizational settings.

Our paper also contributes to the ongoing discovery of the ways in which the process of leadership is shaped by leader gender. By explaining how displays of curiosity will be viewed by others as communal behaviors, we were able to show how the predictions of social role theory (along with role congruity and expectancy violations theories) and the male communality bonus

applied to how followers will respond when leaders display curiosity. Our predictions and findings that the effects of leader displays of curiosity are significantly more positive for the followers of male leaders versus the followers of female leaders suggest that the male communality bonus applies to curiosity-relevant behaviors. In doing so, our work not only contributes to our understanding of how the dynamics of leadership are shaped by gender, but also contributes back to curiosity literature in management by providing evidence that curiosity's effects are influenced by the characteristics of the person who displays that behavior. Indeed, our findings indicate that to fully understand the dynamics of curiosity at work, researchers must not only consider the *what* of this behavior (i.e., nature, causes, and consequences), but also the *who*, in terms of the characteristics of the person performing it.

Our theoretical model and tests of it also add to our understanding of psychological safety in the workplace, particularly in light of reviews of this literature suggesting that boundary conditions of the relationship between leader behavior and follower psychological safety are under-discovered (Edmondson & Lei, 2014; Frazier et al., 2017; Newman et al., 2017). After using social learning theory to position leader displays of curiosity as predictor of follower psychological safety, we use social role theory to identify such a boundary condition—leader gender. By providing evidence for the moderating effects of leader gender on follower psychological safety, we extend research in this area that has noted that leaders play a crucial role in establishing psychological safety in the workplace (e.g., Cha & Edmondson, 2006; Edmondson, 2003; Nembhard & Edmondson, 2006). Specifically, our findings support these assertions, with a caveat that if the leader behavior in question is a communal one, then whether or not it contributes to psychological safety may hinge on the gender of the leader.

Finally, our research builds on the robust body of research on the antecedents of employee voice, particularly psychological safety. We found over 40 studies that provided evidence that the indirect effects of the antecedents of employee voice are mediated by psychological safety (e.g., Ashford et al., 1998; Detert & Burris, 2007; Miceli & Near, 1992; Walumbwa & Schaubroeck, 2009). Beyond adding to this body of research, our findings showed that the indirect effect of leader displays of curiosity on follower voice was conditional upon leader gender. Given that the present research is the first to examine the moderating role of leader or follower gender on the antecedents of employee voice through psychological safety, it raises the question if and how gender may influence past mediated relationships studied within this rich literature.

Limitations and Future Research Directions

Our paper makes meaningful methodological contributions to the study of curiosity in the organizational sciences. First, across four samples, we provided evidence that the construct of leader displays of curiosity was empirically distinct from leader creativity and innovation, and that the effects of leader displays of curiosity were robust enough to hold up even with these related constructs being included in our analyses. In doing so, we answer calls for more research that distinguishes the effects of workplace curiosity beyond similar constructs (Harrison et al., 2020). More importantly for the future study of curiosity among organizational members, these findings should help dispel concerns about the unique contributions that curiosity may have on workplace phenomena. Second, following the recommendations of various methodologists (e.g., Köhler & Cortina, 2021) we tested our model across four independent samples of leader-follower dyads, and our findings replicated across the organizations and industries represented by these four samples. Showing the stability of these effects in this way may be particularly impactful for

the study of curiosity at work, given that this stream of research is still in its early stages and that methodologists have advised that those researching ideas that are either novel or that challenge past assumptions should demonstrate the replicability of their findings across multiple samples and settings (Schmidt, 2009).

Despite these strengths, our research also has limitations worth noting. First, while our data were collected at three time points each separated by seven weeks, our independent and mediating variables came from the same source, which introduces the possibility of a specific type of endogeneity: common method bias (Antonakis et al., 2010). However, as noted earlier in Footnote 4, our tests revealed that common method variance in all four samples was within acceptable ranges set forth by organizational methodologists (e.g., Podsakoff et al., 2012). Second, as this was a temporally lagged study rather than a truly longitudinal one, we cannot claim causality (Antonakis et al., 2010). We encourage future research that tests our predictions using study designs that address these shortcomings.

Our findings should encourage future research to further investigate workplace curiosity, gender, and psychological safety for multiple reasons. First, our findings show that the relationship between leader displays of curiosity and psychological safety was significant for followers of male leaders across all four samples. However, for followers of female leaders this relationship was weaker but significant in two samples and not significant in two other samples. Further, the mediating effect of psychological safety was significant for followers of male leaders across all four samples while only being significant for followers of female leaders in one out of four samples. It is important to note that we cannot conclude that female leader displays of curiosity do not affect follower voice; instead, our supplemental analyses suggest that there may be an unmeasured mediator of the relationship between leader displays of curiosity and follower

voice that is not captured by our theoretical model. For example, it could be that displays of curiosity by leaders enhance communication within workgroups, which positively affects psychological safety and voice. As this example illustrates, there is an opportunity to build on our work by testing additional mechanisms that may further explain the indirect effects of leaders' displays of curiosity on follower behaviors. In particular, we encourage future theorizing and studies that looks more deeply into the effects of female leaders' displays of curiosity on followers, not only in terms of additional mechanisms, but also in terms of additional behavioral outcomes, such as citizenship, task performance, and creativity.

As described earlier, one contribution of our research is that it shows how one employee's curiosity (in this case, a leader) can shape how fellow employees (in this case, followers) feel and behave. However, the effects of curiosity on other organizational members likely extends in directions beyond that from leader to follower. For example, coworker displays of curiosity may affect other coworkers and customer curiosity may affect service providers. Likewise, although we showed how leader displays of curiosity affects followers, given that research is increasingly showing that follower behavior also affects leaders (e.g., Ahmad et al., 2021), it stands to reason that followers' displays of curiosity may affect how leaders think and feel. Finally, although we restricted our theorizing to the work domain, when employees are exposed to displays of curiosity outside of work, such as by inquisitive children or animals, there is reason to believe that the effects of this behavior could spillover onto how employees behave at work. In short, we believe that there is great potential to learn more about when and how curiosity affects other organizational members, and even those outside of work.

In addition, our research focused mainly on the bright side of curiosity at work by showing its positive effects on follower psychological safety and voice. While this approach is

consistent with most research examining employee curiosity, as we explained in this paper, curiosity at work is not without risk. Moreover, past research conducted in non-work settings has found that in some situations too much curiosity may lead to negative outcomes such as poor decision making, unnecessary risk taking, and indulgence (e.g., Goldberg, 2002; Wiggin et al., 2019). This too-much-of-a-good-thing effect could be particularly relevant in the context of leader-follower dyads, since leaders being too curious may not only lead to leader indecision, but also to followers' perceptions that their leader lacks competence. In addition, while the measure of curiosity we used in our studies is a validated measure of curiosity, it includes multiple items that are positively valenced (e.g., "my manager improves work processes"), which could limit the extent to which the measure is able to capture more neutral or negative displays of curiosity by leaders. Therefore, future research should examine potential dark sides to curiosity in the workplace; to do so, it may be necessary to use more neutral measures of curiosity than that which was used in this paper. Taken together, there is an opportunity to retest our model using alternative measures of curiosity as well as experimental designs in which leader curiosity is manipulated.

Our research also opens the door to theorizing that identifies additional employee characteristics, beyond gender, that may shape how their curiosity is received by others. For example, employees who possess high political skill may be better able to craft the nature and timing of their curiosity such that they maximize the positive impact that it has on themselves and others. Likewise, it remains to be examined whether the effects of leader and employee curiosity are consistent across career stages. It stands to reason that displays of curiosity would be highly effective during the newcomer phase, but that effect could wane as employees gain

work experience. In short, researchers should look to theory to identify additional between-person boundary conditions of how displays of curiosity affect others at work.

Finally, we hope that the findings of this paper situate the study of curiosity at work firmly within the leadership literature. Although our paper focused on what we believe is likely one of the primary ways that leader enactment of curiosity has social effects at work, there are almost certainly multiple other ways that displays of leader curiosity have effects on leader effectiveness. Moreover, there is reason to believe that leader displays of curiosity have noteworthy implication for human resource (HR) practices, which is perhaps why when making a business case for workplace curiosity, Gino (2018) recommended the strategic integration of workplace curiosity within recruitment strategies. In examining how displayed curiosity by leaders may shape HR practice, researchers could examine how displayed curiosity by leaders during the recruitment process affects perceptions of job seeker attraction and fit. Similarly, in performance meetings, leaders who display curiosity and cultivate the psychological safety associated with it may find that the employees on the receiving end of evaluations are more participative in what is often a difficult conversation. As these examples illustrate, there lies great potential in researchers continuing to display curiosity when it comes to unearthing the ways in which curiosity contributes to leader effectiveness in general, and to leader effectiveness in the context of HR practices, in particular.

Practical Implications

Our findings have important practical implications, particularly when it comes to the question of whether curiosity is an indispensable behavior for leaders to display. Our findings lend support to the notion that engaging in curiosity is beneficial for leaders, in terms of its positive effects on followers. Therefore, HR professionals and executives may want to

incorporate trainings and interventions into their leadership development programs that help leaders in their firms use curiosity in their leadership. At the same time, our finding that the positive effects of leader displays of curiosity mainly accrue to male leaders should be alarming to these same executives and HR practitioners, many of whom likely recognize the barriers that female leaders already face relative to their male counterparts (e.g., Dwivedi et al., 2018). To counter these effects, organizational leaders should look for ways to help the curiosity of their female leaders stand out. For instance, when female leaders develop new solutions for complex work problems, their male counterparts and superiors should celebrate the behavior, thereby signal to female leaders' followers that taking such risks will be rewarded. This should facilitate followers taking note of the behavior, which should enhance the extent to which it contributes to their feelings of psychological safety.

Our research suggests that the communal element of curiosity can influence followers disproportionately based on their leader's gender. Recognizing the bias inherent in the interaction of gender and leadership, Powell (2020) challenged researchers to uncover actions that could mitigate this bias. Based on the findings of the present research and past research, we recommend that organizations prioritize demystifying factors contributing to the male communality bonus by encouraging male and female leaders alike to engage in communal behavior as a way to help normalize communal behavior regardless of leaders' gender. HR interventions should be implemented to help make employees aware of the tendency to expect (and downgrade) communal behavior from female leaders and be pleasantly surprised (and upgrade) the communal behavior of male leaders. We suggest that followers appreciate, instead of expect, their displays of curiosity by leaders. Our findings suggest that such displays can serve

as a gateway to feel safe and, in turn, speak up to improve the workplace, which is largely beneficial to followers and leaders alike.

Conclusion

The role that leader curiosity plays in the workplace has been widely reported, but seldom studied. To address this particular academic-practitioner gap, and to extend our understanding of the social effects of curiosity at work, we developed a theoretical model that explains how leader displays of curiosity lead to follower voice, via psychological safety, and how leader gender bolsters or attenuates these effects. Across four samples, we found robust support for this model, indicating that the benefits of curiosity extend beyond those who engage in it, although in the case of leaders, this was true for men but mixed for women. As such, our findings lend some credence to claims that leader displays of curiosity are good for organizational functioning, but importantly, we show that this is not always the case. Beyond expanding the focus of the study of curiosity to include the social consequences of leader displays of curiosity, and showing the boundaries of these effects, we hope that our theorizing and findings provide a step toward additional research on how and when employees' curiosity affects other organizational members.

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Tables and Figures

Table 1. Confirmatory Factor Loadings for Leader Displays of Curiosity Items

Item Number	Item	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
1	My manager enjoys developing new strategies.	.78	.84	.77	.85	.81
2	Regarding practical problems, my manager is also interested in the underlying theory.	.76	.77	.78	.81	.75
3	When confronted with complex problems, my manager likes to look for new solutions.	.78	.85	.86	.81	.83
4	My manager is eager to learn.	.79	.85	.74	.83	.76
5	My manager critically challenges existing theories.	.82	.78	.79	.86	.73
6	My manager improves work processes by making innovative suggestions.	.79	.89	.83	.88	.83

Notes. Sample 1 $N = 263$, Sample 2 $N = 299$, Sample 3 $N = 255$, Sample 4 $N = 306$, Sample 5 $N = 187$ (for leader displays of curiosity confirmatory factor analyses only).

Effects of Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice

Table 2. Means, Standard Deviations, Correlations, and Reliabilities (Samples 1 and 2)

	Sample 1 Mean (SD)	Sample 2 Mean (SD)	1	2	3	4	5	6	7	8
1. Leader Gender ^a	0.36 (0.48)	0.35 (0.48)	-	.29**	-.01	-.07	-.05	-.07	-.29**	-.01
2. Follower Gender ^a	0.33 (0.47)	0.53 (0.50)	.38**	-	-.01	.03	-.01	.00	-.03	.06
3. Dyadic Tenure	4.81 (4.49)	4.53 (4.30)	-.03	-.02	-	-.04	.09	.14*	.10	.12*
4. Leader Creativity	4.53 (1.80)	4.61 (1.99)	.14*	-.03	-.06	(.94/.96)	.23**	.44**	.10	.27**
5. Leader Role Innovation	4.42 (1.64)	4.67 (1.61)	-.22**	-.11	.09	.32**	(.88/.91)	.35**	.16**	.27**
6. Ldr Displays of Curiosity	5.04 (1.35)	5.15 (1.30)	.09	-.06	.15*	.48**	.30**	(.90/.92)	.31**	.47**
7. Follower Psych Safety	5.32 (1.53)	5.50 (1.45)	-.12*	.01	.07	.33**	.37**	.48**	(.89/.94)	.41**
8. Follower Voice ^b	5.01 (1.34)	5.34 (1.32)	-.08	-.03	.14*	.33**	.38**	.41**	.56**	(.91/.94)

Note. Sample 1 (below diagonal): $N = 263$; sample 4 (above diagonal): $N = 299$; Scale reliabilities are presented in parentheses.

^a 1 = Women, 0 = Men; ^b = Leader-rated variable (all other variables were follower-rated); * $p < .05$. ** $p < .01$.

Table 3. Means, Standard Deviations, Correlations, and Reliabilities (Samples 3 and 4)

	Sample 3 Mean (SD)	Sample 4 Mean (SD)	1	2	3	4	5	6	7	8
1. Leader Gender ^a	0.36 (0.50)	0.43 (0.50)	-	.32**	-.07	-.04	-.09	-.12*	-.15**	-.08
2. Follower Gender ^a	0.47 (0.50)	0.47 (0.50)	.22**	-	-.04	-.09	-.11	-.03	-.12*	-.03
3. Dyadic Tenure	5.10 (5.04)	4.62 (4.28)	-.10	-.08	-	.18**	.11	.17**	.04	.18**
4. Leader Creativity	4.49 (1.80)	4.82 (1.78)	.00	.13*	.03	(.96/.96)	.20**	.31**	.10	.09
5. Leader Role Innovation	4.18 (1.80)	4.53 (1.60)	-.21**	-.01	.14*	.15*	(.95/.93)	.32**	.16**	.28**
6. Ldr Displays of Curiosity	5.30 (1.10)	5.05 (1.33)	-.25**	.05	.12	.44**	.31**	(.91/.93)	.43**	.45**
7. Follower Psych Safety	5.63 (1.43)	5.51 (1.47)	-.32**	.00	.12	.12	.14**	.37**	(.95/.95)	.46**
8. Follower Voice ^b	5.45 (1.08)	5.26 (1.27)	-.21**	.13*	.16*	.21**	.18**	.53**	.35**	(.92/.93)

Note. Sample 3 (below diagonal): $N = 255$; sample 4 (above diagonal): $N = 306$; Scale reliabilities are presented in parentheses.

^a 1 = Women, 0 = Men; ^b = Leader-rated variable (all other variables were follower-rated). * $p < .05$. ** $p < .01$.

Effects of Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice

Table 4. Regression Analyses of Leader Displays of Curiosity on Follower Psychological Safety and Voice (All Samples)

	Psychological Safety		Voice ^b	
	β (B, S.E.)	ΔR^2	β (B, S.E.)	ΔR^2
SAMPLE 1, N = 263				
Follower Gender ^a	.06 (.20, .17)		.02 (.05, .15)	
Dyadic Tenure	.00 (.00, .02)		.09 (.03, .02)	
Leader Creativity	.07 (.06, .05)		.13* (.09, .05)	
Leader Role Innovation	.24** (.22, .05)		.25** (.05, .20)	
Leader Displays of Curiosity	.38** (.43, .07)	.11**	.27** (.26, .06)	.05**
SAMPLE 2, N = 299				
Follower Gender ^a	-.02 (-.06, .02)		.06 (.16, .13)	
Dyadic Tenure	.04 (.02, .02)		.06 (.02, .02)	
Leader Creativity	-.05 (-.03, .05)		.07* (.05, .04)	
Leader Role Innovation	.06 (.05, .05)		.11* (.09, .04)	
Leader Displays of Curiosity	.31** (.34, .07)	.07**	.40** (.40, .06)	.11**
SAMPLE 3, N = 255				
Follower Gender ^a	-.01 (-.03, .17)		.12* (.25, .11)	
Dyadic Tenure	.07 (.02, .02)		.10 (.02, .01)	
Leader Creativity	-.05 (-.04, .05)		-.05 (-.03, .04)	
Leader Role Innovation	.02 (.01, .05)		.00 (.00, .03)	
Leader Displays of Curiosity	.37** (.49, .09)	.10**	.54** (.53, .06)	.22**
SAMPLE 4, N = 306				
Follower Gender ^a	-.12* (-.34, .15)		-.01 (-.01, .13)	
Dyadic Tenure	-.04 (.01, .02)		.11 (.03, .02)	
Leader Creativity	-.05 (-.04, .05)		-.09 (-.06, .04)	
Leader Role Innovation	.02 (.01, .05)		.15** (.12, .04)	
Leader Displays of Curiosity	.45** (.50, .06)	.17**	.42** (.40, .05)	.15**

Note. Sample 1: N = 263; sample 2: N = 299; sample 3: N = 255; sample 4 = 306. ^a Women = 1, Men = 0; ^b = leader-rated variable; Standardized regression coefficients (β) are reported with unstandardized regression coefficients (B) and standard errors (S.E.) reported in parenthesis. All dependent variables are leader-rated.

* $p < .05$

** $p < .01$

Effects of Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice

Table 5. Conditional (Leader Gender) and Simple Indirect Effects of Leader Displays of Curiosity on Follower Voice through Psychological Safety

Dependent Variable	Indirect Effect (Simple Mediation; 95% CI)	Indirect Effect by Leader Gender		Index of Moderated-Mediation (95% CI)
Sample 1, N = 263				
Follower Voice ^a	.17* (.08, .28; S.E.=.05)	Followers of Male Leaders	.25* (.14, .38; S.E.=.06)	-.16* (-.31, -.05; S.E.=.07)
		Followers of Female Leaders	.09 (-.03, .22; S.E.=.06)	
Sample 2, N = 299				
Follower Voice ^a	.09* (.03, .17; S.E.=.04)	Followers of Male Leaders	.13* (.06, .21; S.E.=.04)	-.10* (-.24, -.01; S.E.=.06)
		Followers of Female Leaders	.03 (-.07, .13; S.E.=.05)	
Sample 3, N = 255				
Follower Voice ^a	.06* (.01, .15; S.E.=.04)	Followers of Male Leaders	.08* (.01, .19; S.E.=.05)	-.07* (-.17, -.01; S.E.=.04)
		Followers of Female Leaders	.02 (-.04, .10; S.E.=.05)	
Sample 4, N = 306				
Follower Voice ^a	.14* (.06, .26; S.E.=.05)	Followers of Male Leaders	.22* (.11, .35; S.E.=.06)	-.15* (-.26, -.06; S.E.=.05)
		Followers of Female Leaders	.07 (-.01, .19; S.E.=.05)	

Notes. * = 95% confidence intervals (CI) did not include zero. Unstandardized coefficients (B) are reported with standard errors (S.E.). Significant index of moderated-mediation indicate that moderated-mediation was achieved because difference between the indirect effect of leader displays of curiosity on follower voice via psychological safety was significantly different for followers of female leaders compared to followers of male leaders.

^a = leader-rated variable

Effects of Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice

Table 6. Moderated Regression Analyses of Leader Displays of Curiosity on Follower Psychological Safety and Voice (All Samples)

	Psychological Safety		Voice ^b	
	β (B, S.E.)	ΔR^2	β (B, S.E.)	ΔR^2
SAMPLE 1, N = 263				
Follower Gender ^a	.13* (.42, .18)		.06 (.17, .16)	
Dyadic Tenure	.00 (.00, .02)		.09 (.03, .02)	
Leader Creativity	.15* (.13, .05)		.19** (.14, .05)	
Leader Role Innovation	.12* (.12, .06)		.16* (.13, .05)	
Leader Displays of Curiosity	.44** (.50, .07)		.31** (.31, .06)	
Leader Gender ^a	-.20** (-.63, .18)		-.11 (-.32, .17)	
Lead Displays of Cur x Lead Gender ^a	-.19** (-.42, .12)	.03**	-.17** (-.33, .11)	.02**
SAMPLE 2, N = 299				
Follower Gender ^a	.06 (.16, .16)		.05 (.13, .14)	
Dyadic Tenure	.06 (.02, .02)		.07 (.02, .02)	
Leader Creativity	-.07 (-.05, .04)		.04 (.06, .04)	
Leader Role Innovation	.04 (.03, .05)		.10 (.08, .04)	
Leader Displays of Curiosity	.32** (.35, .07)		.42** (.43, .06)	
Leader Gender ^a	-.30** (-.90, .17)		.00 (.01, .14)	
Lead Displays of Cur x Lead Gender ^a	-.17** (-.39, .12)	.03**	-.17** (-.36, .10)	.03**
SAMPLE 3, N = 255				
Follower Gender ^a	.02 (.07, .17)		.12* (.26, .12)	
Dyadic Tenure	.07 (.02, .02)		.10 (.02, .01)	
Leader Creativity	-.01 (-.01, .05)		-.03 (-.02, .04)	
Leader Role Innovation	.04 (.03, .05)		.00 (.00, .03)	
Leader Displays of Curiosity	.36** (.47, .09)		.56** (.55, .06)	
Leader Gender ^a	-.25** (-.75, .18)		-.11* (.24, .12)	
Lead Displays of Cur x Lead Gender ^a	-.21** (-.53, .15)	.04**	-.18** (-.35, .11)	.03*
SAMPLE 4, N = 306				
Follower Gender ^a	-.07 (-.20, .16)		.03 (.06, .13)	
Dyadic Tenure	-.05 (-.02, .02)		.10* (.03, .02)	
Leader Creativity	-.06 (-.05, .04)		-.10 (-.07, .04)	
Leader Role Innovation	.01 (.01, .05)		.15** (.12, .04)	
Leader Displays of Curiosity	.49** (.54, .06)		.46** (.44, .05)	
Leader Gender ^a	-.08 (-.24, .16)		-.02 (-.06, .13)	
Lead Displays of Cur x Lead Gender ^a	-.24** (-.52, .11)	.05**	-.23** (-.44, .09)	.05**

Note. Sample 1: N = 263; sample 2: N = 299; sample 3: N = 255; sample 4 = 306. ^a Women = 1, Men = 0; ^b = leader-rated variable; * $p < .05$; ** $p < .01$.

Table 7. Simple Slopes for Leader Displays of Curiosity and Gender on Follower Psychological Safety and Voice (All Samples)

Sample	Dependent Variable			
	Psychological Safety		Voice ^a	
	Followers of Male Leaders	Followers of Female Leaders	Followers of Male Leaders	Followers of Female Leaders
	B / S.E.	B / S.E.	B / S.E.	B / S.E.
1	.65** / .09	.23** / .09	.43** / .08	.10 / .09
2	.49** / .08	.10 / .10	.55** / .07	.19* / .09
3	.66** / .11	.13 / .12	.67** / .08	.33** / .08
4	.76** / .08	.24** / .08	.63** / .07	.19** / .07

Notes: Sample 1: $N = 263$; Sample 2: $N = 299$; Sample 3: $N = 255$; Sample 4: $N = 306$. Unstandardized coefficients (B) are reported with standard errors (S.E.); Shaded areas indicate moderation was significant.

^a = leader-rated variable

* = $p < .05$; ** = $p < .01$

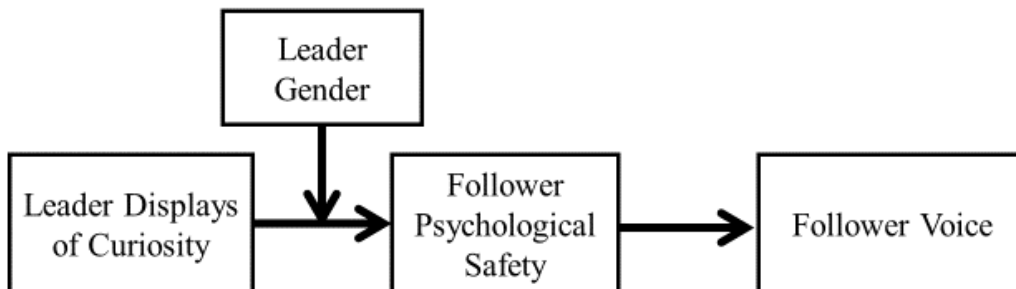


Figure 1. Theoretical model hypothesizing that the indirect effect of leader displays of curiosity on follower voice via follower psychological safety is conditional upon leader gender.

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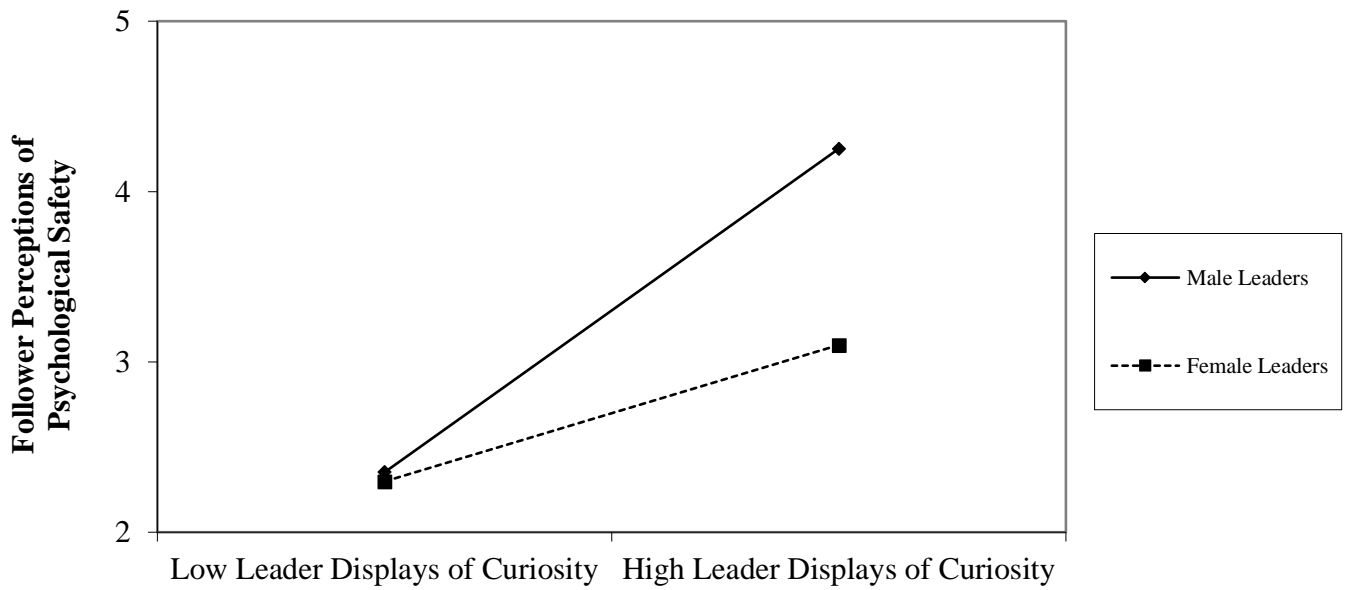


Figure 2. The interactive effects of leader displays of curiosity and leader gender on follower psychological safety (Sample 1, $N = 263$).

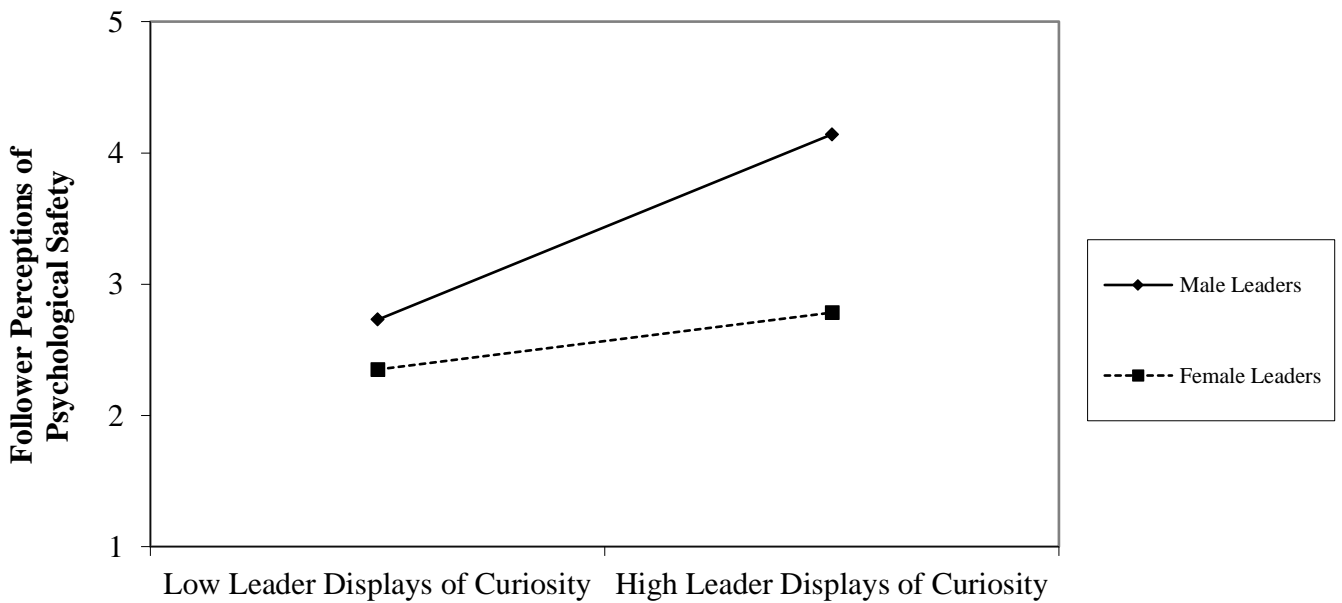


Figure 3. The interactive effects of leader displays of curiosity and leader gender on follower psychological safety (Sample 2, $N = 299$).

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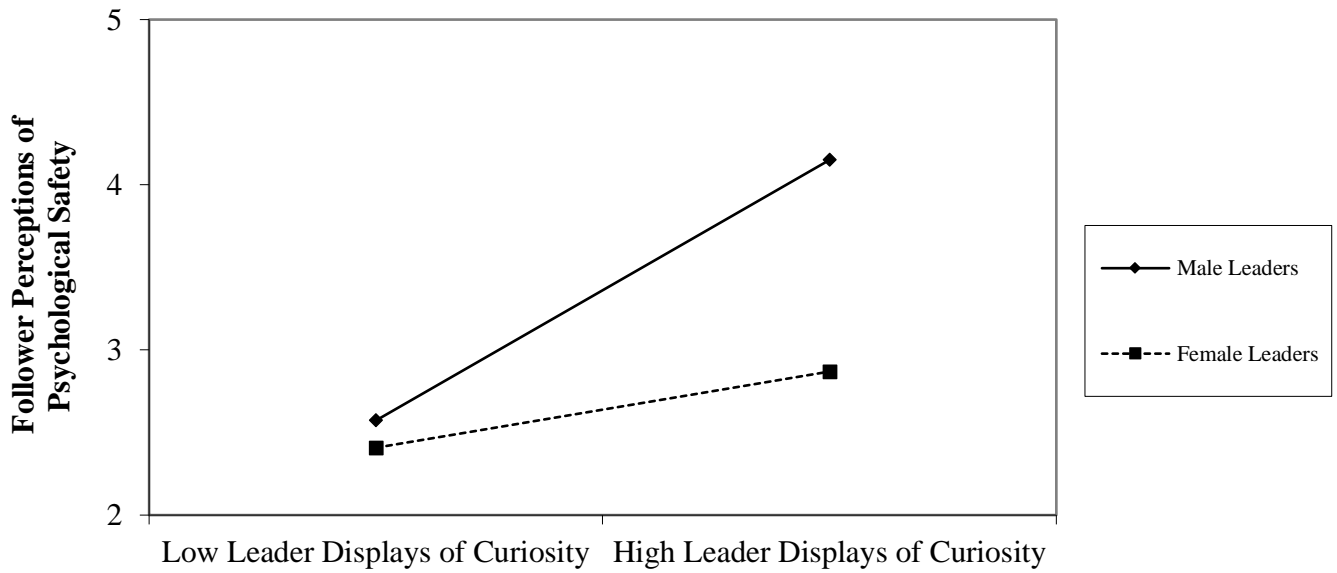


Figure 4. The interactive effects of leader displays of curiosity and leader gender on follower psychological safety (Sample 3, $N = 255$).

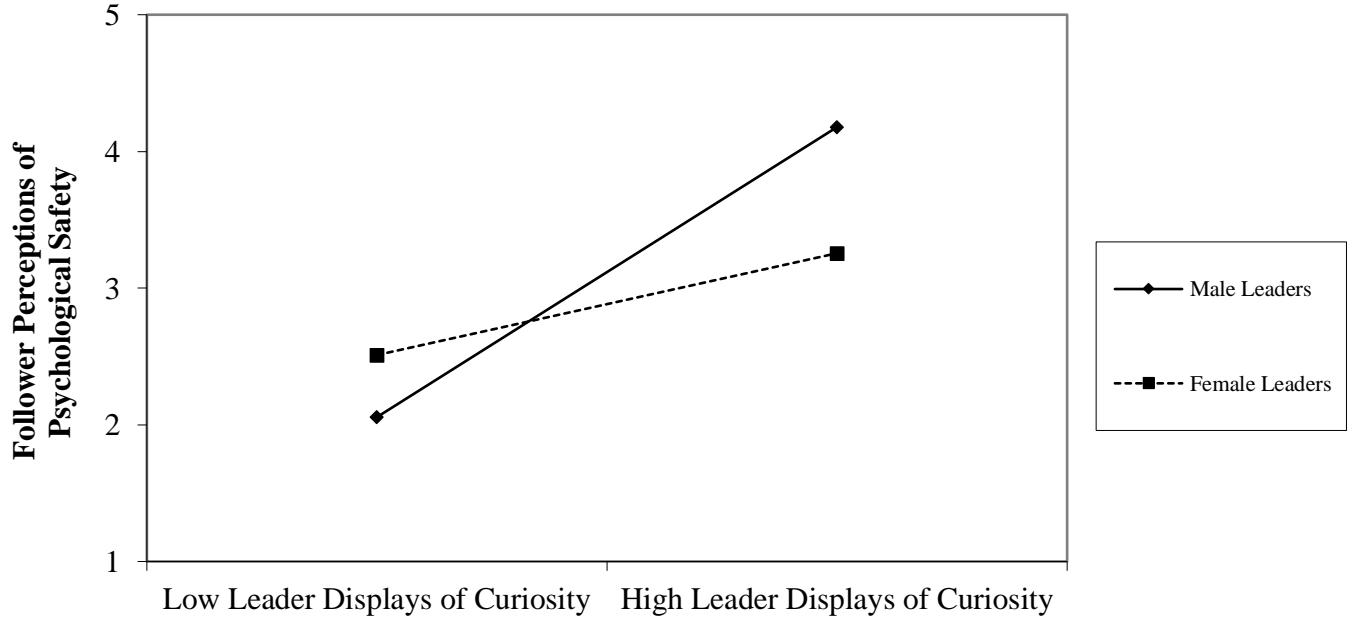


Figure 5. The interactive effects of leader displays of curiosity and leader gender on follower psychological safety (Sample 4, $N = 306$).

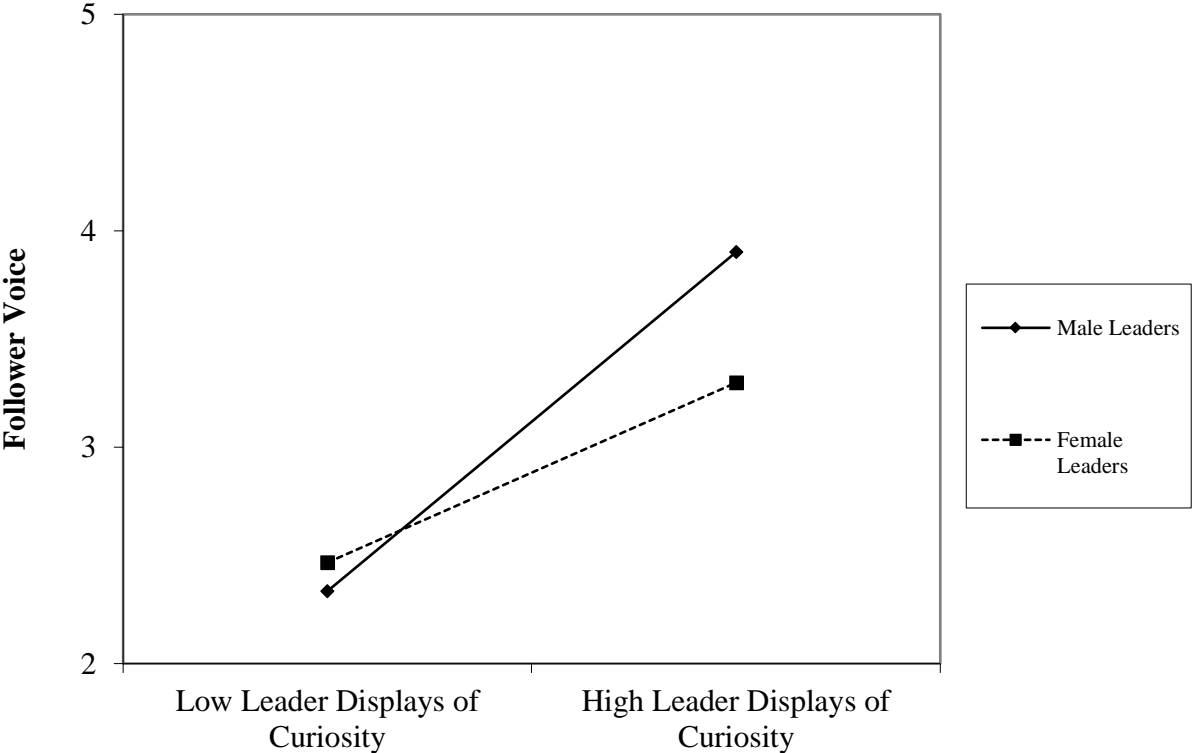


Figure 6. The interactive effects of leader displays of curiosity and leader gender on follower voice (Sample 3, $N = 255$).