Nonlinear consequences of promotive and prohibitive voice for managers' responses: The roles of voice frequency and LMX

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Abstract

Departing from past research on managers' responses to employee voice, we propose and examine a nonlinear linkage between promotive/prohibitive voice and managers' evaluations of voicers (i.e., manager-rated voicers' promotability and overall performance). Drawing from social persuasion theory, we theorize that managers tend to give more positive evaluations to employees who engage in a moderate frequency of promotive/prohibitive voice than those who either rarely speak up or speak up very frequently. In Study 1, based on a sample from a Chinese bank, we found that leader-member exchange quality (LMX) moderated the inverted U-shaped linkage of prohibitive voice with manager-rated promotability of voicers, while the frequency of promotive voice was not related to promotability, irrespective of levels of LMX. In Study 2, using employee-reported voice frequency, rather than the manager-rated measures adopted in Study 1, we largely replicated the main findings of Study 1 based on a sample from an information technology firm in the United States. In Study 3, using another U.S. sample, from a financial services firm, we found that manager-perceived voice constructiveness mediated the curvilinear interactive effect of prohibitive voice (rather than promotive voice) and LMX on managers' evaluations of employees' overall performance.

Keywords: Promotive voice, prohibitive voice, LMX, consequences of voice, social persuasion

Challenging voice, defined as verbal expressions of opinions, ideas, or concerns to constructively change and modify current operations (Burris, 2012; Morrison, 2014), is believed to improve organizational or unit functioning (Howard-Grenville, 2007; Li, Liao, Tangirala, & Firth, in press; Van Dyne & LePine 1998). It remains undetermined, however, whether employees engaging in such voice behavior tend to receive favorable or unfavorable responses from managers. A recent meta-analysis of 24 empirical studies suggested that managers' responses depend on the voice content (Chamberlin, Newton, & LePine, 2017). Specifically, while promotive voice (i.e., voice focused on suggesting new solutions; Liang, Farh, & Farh, 2012) leads to managers' more positive appraisals of voicers' overall performance, prohibitive voice (i.e., voice focused on pointing out current problems; Liang et al., 2012) leads to managers' more negative evaluations. Although these meta-analytic findings are enlightening, recent voice research has suggested that managers' responses to employee voice are determined not only by the content of voice (e.g., messages with or without a solution), but also by the characteristics of voicers (e.g., expertise of voicers) and the voicing context (e.g., organizational norms; Whiting, Maynes, Podsakoff, & Podsakoff, 2012). These factors, however, were not taken into account in Chamberlin et al.'s (2017) meta-analysis.

To provide a more complete explanation of managers' responses to challenging voice, our study investigates *when* and *why* promotive/prohibitive voice is positively associated with managers' evaluations of voicers, which refers to as managers' appraisals of employees' potential value for the organization and overall performance (Burris, 2012, p. 852). We draw from social persuasion theory (e.g., Briñol & Petty, 2009; Jones, Sinclair, & Courneya, 2003; Petty & Cacioppo, 1986) to suggest that, in organizational settings, the effects of promotive voice and prohibitive voice on managers' evaluations of voicers may not follow a simple linear pattern, as depicted in Chamberlin et al.'s (2017) study. Rather, we propose

employees' frequency of voicing (an observable voicer characteristic) and their leader-member exchange quality with their supervisors (LMX, a relational context) as two salient variables that regulate the effects of promotive voice and prohibitive voice on managers' evaluations.

Specifically, frequency of voice, defined as how often an employee takes the initiative to raise various work-related issues to his/her immediate supervisor, ranging from never doing it to voicing very frequently, signals a salient characteristic of voicers: the extent to which they make efforts to initiate changes that may benefit the organization. We propose that frequency of promotive and prohibitive voice has an inverted U-shaped relationship, rather than a linear relationship, with managers' evaluations. This is because managers tend to appreciate and reward employees who exhibit a moderate level of challenging voice more than those who show either few such initiatives or overly persistent efforts to challenge the status quo (e.g., Fuller, Marler, Hester, & Otondo, 2015; Grant, Parker, & Collins, 2009; Lam, Rees, Levesque, & Ornstein, in press; Milliken, Morrison, & Hewlin, 2003; Schilit & Locke, 1982). Building on recent works on the effects of voice content (Chamberlin et al., 2017; Maynes & Podsakoff, 2014; Whiting et al., 2012), we further suggest a refined prediction of the differential nonlinear impacts of promotive voice and prohibitive voice on managers' responses. By proposing a nonlinear effect of voice frequency on managers' evaluations, we offer a new way to address the mixed findings regarding the effects of challenging voice on managers' evaluations (Burris, 2012; Chamberlin et al., 2017; Seibert, Kraimer, & Crant, 2001; Van Dyne & LePine, 1998; Whiting, Podsakoff, & Pierce, 2008).

Moreover, following social persuasion theory (Briñol & Petty, 2009: Menon & Blount, 2003), we cast LMX as a salient relational context that exerts an overriding influence on managers' responses to promotive/prohibitive voice. We theorize that while managers in high LMX contexts tend to give positive evaluations to voicing employees irrespective of the

types of voice and voice frequency levels due to ingroup favoritism, there is an inverted U-shaped relationship between the frequency of promotive/prohibitive voice and managers' evaluations in low LMX contexts. Our model thus challenges the idea that challenging voice, in general, and prohibitive voice, in particular, results in managers' less favorable evaluations, especially for outgroup employees (Menon & Blount, 2003; Whiting et al., 2012).

Finally, the cognition in persuasion model, an extension of social persuasion theory (Albarracín, 2002, Albarracín, & Wyer, 2001; Hart et al., 2009), posits that cognitive processes, such as message recipients' cognitive assessments of the beneficial outcomes of messages, play a central role in explaining how various social persuasion factors (e.g., source, content, and context characteristics) jointly influence receivers' responses to persuasion. Drawing from this theory, we propose and examine the mediating role of manager-perceived *voice constructiveness*, defined as the extent to which managers regard the voiced issues as making positive contributions to the organization (Whiting et al., 2012). In so doing, we contribute to the voice literature by theorizing and demonstrating the critical role of cognitive mechanisms explaining the consequences of challenging voice in organizational settings.

In short, we advance the literature of the consequences of voice by examining an integrated model that shows what (voice content), when (voice frequency and LMX), and why (voice constructiveness) challenging voice influences managers' evaluations of voicers by testing our model in two culturally different nations (China and the United States) and by including both manager-reported (Studies 1 and 3) and employee-reported (Study 2) voice behavior in our analyses. Figure 1 illustrates our proposed research model.

Theory and Hypotheses

Social Persuasion and Consequences of Challenging Voice

Social persuasion theory suggests that the content of messages (e.g., how the

messages are framed) influences the reactions of message recipients (McGuire, 1985). Receivers are more receptive to messages with convincing evidence (Isenberg, 1986; McCroskey, 1969), clearly stated solutions (Hovland & Mandell, 1952), and positive framing (e.g., Levin, Schneider, & Gaeth, 1998). In line with this reasoning, Chamberlin et al.'s (2017) meta-analytic study demonstrated that when the content of challenging voice is framed as expressing opportunities to enhance organizational functioning by doing new things in new ways in the future (i.e., promotive voice; Liang et al., 2012), managers tend to appraise voicers' overall performance more favorably. By contrast, when the content of challenging voice is framed as pointing out problems with current practices and inhibiting wrongdoings to improve organizational functioning (i.e., prohibitive voice; Liang et al., 2012), managers tend to give less favorable performance evaluations to the voicing employees. Although both promotive and prohibitive voice are motivated by the same desire for well-intended change and are driven by strong commitment to and identification with the organization, the differences in their contents may result in managers' differential judgments and assessments of the value and potential beneficial outcomes of voice, which in turn influence their evaluations of voicers' overall performance (Chamberlin et al., 2017).

Accumulated evidence in the social persuasion research has suggested, however, that message recipients' assessments of messages' beneficial outcomes and their subsequent reactions are affected not only by the content, but also by source and context characteristics (McGuire, 1985). In a seminal work on social persuasion, for example, Petty, Cacioppo, and Goldman (1981) showed that the content of the message (e.g., strength of arguments) gave way to the source characteristic (e.g., expert status) in influencing message recipients' judgments of the quality of the message within the context of low thinking, suggesting that peripheral cues can play an important role in shaping social persuasion processes. Extending this idea to the voice context, Whiting et al. (2012) proposed specific conditions that

influence managers' evaluations of the voice and the voicers. Using a series of laboratory studies, Whiting et al. (2012) demonstrated, for example, that source, message, and context characteristics independently influence managers' assessments of the voiced issues and thus their evaluations of voicers' overall performance.

Due to the nature of laboratory studies, Whiting et al.'s (2012) model is particularly relevant to managers' reactions to a single "incident" of voice. In reality, however, challenging voice is not an one-off endeavor. Employees may voice out challenging issues and interact with their supervisors over a relatively long period of time. Hence, managers' evaluations of voicing employees are shaped not only by how employees frame their voice (promotive vs. prohibitive), but also by employees' habit of voice behaviors (Lam et al., in press) and by employees' ongoing social interactions with their supervisors (Dutton & Ashford, 1993). We therefore propose that, in organizational settings, the effects of promotive and prohibitive voice on managers' evaluations may not follow a linear pattern, as depicted in Chamberlin et al.'s (2017) study, but instead are influenced by voicers' frequency of voicing that reflects important characteristics of voicers and their LMX quality with managers, which captures a salient voicing context at work.

Frequency and Content of Challenging Voice

In the workplace, some employees may remain silent; some may speak up occasionally; others may frequently voice up issues that challenge the status quo (Morrison & Milliken, 2003). Prior research has suggested that individual characteristics, such as work experience, conscientiousness, and proactive personality, predict how often employees speak up at work (Li, Liang, & Crant, 2010; Thomas, Whitman, & Viswesvaran, 2010). In a recent paper, Lam et al. (in press) developed a theoretical framework to depict how employees may form stable "habits" of voicing. They argued that some individuals may lack situational awareness and controllability and are concerned about efficiency. As a result, these

individuals tend to develop a "habit" of voicing and engage in voice behaviors more frequently than others. According to social persuasion theory, certain characteristics of message senders can communicate important cues that trigger message recipients' judgmental shortcuts or heuristics of processing the messages, determine message recipients' favorable or unfavorable thinking about the messages, or serve as arguments for or against the persuasive attempts (Briñol & Petty, 2009; Petty & Cacioppo, 1986). Thus, in line with this theory, we regard frequency of voice as an easy-to-observe characteristic of voicers that may provide salient peripheral cues, shaping managers' assessments of promotive and prohibitive voice. We anticipate that low, moderate, and high frequency levels may signal qualitatively different characteristics of the voicer, causing an inverted U-shaped relationship between the frequency of promotive and prohibitive voice and managers' evaluations of the voicing employee.

Compared to employees exhibiting moderate frequencies of promotive/prohibitive voice, a low frequency may signal to managers that the voicing employees are exerting relatively little effort to initiate changes and challenge the status quo to improve the organization's functioning. This informative characteristic of voicing employees may provide salient cues that exert a negative influence on managers' assessments of voice from these employees, regardless whether the voice is framed as promotive or prohibitive (Eagly, Wood, & Chaiken, 1978). This is because managers tend to degrade employees who do not take the initiative to engage in their work and contribute to the organization (Fuller et al., 2015; Grant et al., 2009). Managers may thus form less favorable assessments of the voiced issues from employees with low voice frequency and may be less likely to reward their voice behavior with positive evaluations.

A moderate frequency of promotive/prohibitive voice may inform managers that the voicing employees are exerting relatively more effort to initiate changes and challenge the

status quo for the organization than those who rarely voice up. This informative characteristic of the voicers may lead managers to make more positive judgments of their voiced issues and reward them with more favorable evaluations, regardless whether the voice is promotive or prohibitive. This is because managers in general tend to appreciate and reward employees who take the initiative to contribute to the organization (Burris, Detert, & Romney, 2013; Fuller et al., 2015; Grant et al., 2009; Whiting et al., 2008; Whiting et al., 2012).

High frequency of promotive/prohibitive voice, in contrast, may result in managers' unfavorable responses. Compared to employees who engage in a moderate frequency of promotive/prohibitive voice, a high voice frequency may signal that the voicing employees are being relatively more forceful in their efforts to challenge the status quo. Instead of predicting a linear and stronger positive effect of promotive/prohibitive voice on managers' evaluations, we suggest that managers may not view promotive/prohibitive voice positively at high frequencies. Rather, this informative characteristic of voicing employees might cause managers to form unfavorable judgments of voiced issues from these employees. This is because managers tend to resist employees who persistently and frequently challenge the status quo, and thus they may devalue their voice (e.g., Milliken et al., 2003; Schilit & Locke, 1982). Also, as Lam et al. (in press, p. 12) have theorized, employees who habitually engage in challenging voice tend to "be viewed as 'loose cannons' . . . who 'shoot from the hip'," causing managers to discredit their views. This is because managers may think that these employees have not given sufficient thought to the voiced issues, and thus they may see the employees' voice as less valuable and constructive. Hence, high frequency of voice provides a salient cue that might exert a negative influence on managers' assessments of challenging voice from these employees and thus their evaluations of the voicers, irrespective of the voiced content. Taken together, we posit that voice frequency plays a key role in determining managers' responses. Specifically, compared to low and high frequencies of

promotive/prohibitive voice, we predict that moderate frequencies are more likely to drive managers to reward voicers by giving them favorable evaluations.

Hypothesis 1a: There is an inverted U-shaped relationship between the frequency of promotive voice and managers' evaluations of voicing employees.

Hypothesis 1b: There is an inverted U-shaped relationship between the frequency of prohibitive voice and managers' evaluations of voicing employees.

Although voice frequency may serve as a salient source characteristic that shapes managers' responses to challenging voice, Chamberlin et al.'s (2017) meta-analytic study suggested that different contents of challenging voice lead managers to evaluate voicers differently. Building on the insights from Chamberlin et al.'s (2017) study, but departing from the linear perspective of previous studies, we argue that the curvilinear effect of the frequency of promotive voice on managers' evaluations may follow a different pattern from that of prohibitive voice. We posit that both types of voice may be positively associated with managers' evaluations at low-to-moderate frequency levels, as managers tend to appreciate and reward employees for making efforts to challenge the status quo to improve organization functioning (Van Dyne & LePine, 1998). At high frequency levels, although we expect that both promotive voice and prohibitive voice tend to have a negative impact on managers' evaluations, we predict that the negative effect of prohibitive voice is stronger than that of promotive voice. This is because the future-oriented nature and constructive tone of promotive voice tend to reinforce managers' appreciation of employees' efforts to initiate changes for the organization (Chamberlin et al., 2017; Liang et al., 2012), mitigating managers' negative responses to such voice, even at high frequency levels. By contrast, as prohibitive voice focuses on pointing out current operational problems and risks, it is likely to intensify managers' negative emotions and defensiveness (Liang et al., 2012, Van Dyne, Cummings, & McLean Parks, 1995; Whiting et al., 2012), especially at very high frequency levels. Therefore, we predict that the inverted U-shaped relationship between voice frequency

and managers' evaluations will be stronger for prohibitive voice than for promotive voice.

> *Hypothesis 1c: The inverted U-shaped relationship between prohibitive voice and managers' evaluations is stronger than that between promotive voice and managers' evaluations, in that, at high frequency levels, prohibitive voice is more negatively related to managers' evaluations than promotive voice is.*

The Moderating Role of LMX

In addition to source characteristics and message content, the context in which persuasion occurs may also affect its outcomes (McGuire, 1985). Social persuasion research has suggested that message receivers' cognitive evaluations of persuasion endeavors are influenced largely by the relational context, such as the relationship quality between the message sender and the message receiver (e.g., Briñol & Petty, 2009; Menon & Blount, 2003). People tend to respond more positively to message senders who belong to their ingroup, because having a shared identity induces ingroup favoritism and attributions of well-intended motives to message senders (e.g., Clark & Maass, 1988; Crano & Chen, 1998; Mason, Corey, & Smith, 2007), motivates people to process messages by taking senders' perspectives (Vaniv & Choshen-Hillel, 2012), and activates cooperative schemas that facilitate the messages' persuasiveness (Tost, Gino, & Larrick, 2012). Such ingroup favoritism is likely to occur in supervisor-subordinate dyads with high LMX (e.g., Graen & Uhl-Bien, 1995; Liden, Sparrowe, & Wayne, 1997). Hence, we cast LMX as an important indicator of the relational context for voice behavior in the workplace.

We expect that the curvilinear effect of both promotive voice and prohibitive voice on managers' evaluations of voicers is less salient in supervisor-subordinate dyads with high LMX than those with low LMX. Since subordinates are treated as ingroup members in high LMX contexts (Liden et al., 1997; Uhl-Bien & Maslyn, 2003), ingroup favoritism tends to cause managers to make more favorable judgments of their voiced issues, irrespective of the frequency and content of voice. Prior studies have shown that when subordinates with high

LMX speak up, supervisors are likely to see their suggestions and even criticisms as assets and as indicating employees' initiatives and efforts to contribute to collective interests (e.g., Liden, Wayne, & Stilwell, 1993; Scandura & Schriesheim, 1994; Uhl-Bien & Maslyn, 2003). In other words, in high LMX contexts, regardless whether these ingroup subordinates engage in low or high frequencies of challenging voice and regardless whether the content is promotive or prohibitive, managers tend to view their voiced issues in a positive light and thus reward them with more favorable evaluations.

By contrast, in low LMX relationships, formal hierarchical status is rigidly emphasized, supervisors and subordinates keep a power distance from each other, and supervisors treat subordinates as outgroup members (e.g., Liden et al., 1997; Uhl-Bien & Maslyn, 2003). Although managers may generally resist challenging voice from outgroup members (Menon & Blount, 2003), they may still appreciate outgroup members who make efforts to initiate changes to potentially improve organizational practices. Therefore, in low LMX dyads, promotive/prohibitive voice may be positively associated with managers' evaluations of voicers at low-to-moderate frequency levels. Yet, managers may not tolerate a high frequency of promotive/prohibitive voice from these outgroup members. Very frequent attempts to challenge the status quo from outgroup members may induce stronger resistance from managers and may give managers the impression that the voicers put insufficient effort into considering the voiced issues, causing managers to dismiss the potentially beneficial outcomes of voice from these outgroup members. As a result, managers are less likely to reward outgroup members who voice very frequently by giving them positive evaluations. In short, we anticipate that in low LMX dyads, there is a salient inverted U-shape relationship between the frequency of promotive/prohibitive voice and managers' evaluations of voicing employees. We thus predict that:

Hypothesis 2a: LMX moderates the curvilinear link between the frequency of

promotive voice and managers' evaluations of voicing employees, in that the positive relationship between promotive voice and managers' evaluations is more likely to become negative at high frequencies of voice in low LMX dyads than in high LMX dyads.

Hypothesis 2b: LMX moderates the curvilinear link between the frequency of prohibitive voice and managers' evaluations of voicing employees, in that the positive relationship between prohibitive voice and managers' evaluations is more likely to become negative at high frequencies of voice in low LMX dyads than in high LMX dyads.

So far, we have predicted a stronger inverted U-shaped link between prohibitive voice and managers' evaluations than that between promotive voice and managers' evaluations (Hypothesis 1c), because, at high frequency levels, managers are more likely to resist prohibitive voice than promotive voice. We then contended that because of strong ingroup favoritism, high LMX may have an overriding positive influence on managers' evaluations of voicers, irrespective of frequency levels and voice contents (Hypotheses 2a and 2b). In high LMX dyads, even for employees who engage in prohibitive voice behavior frequently, managers may view their voice in the same positive light as they view promotive voice. Following this logic, at high frequency levels, high LMX forms a powerful relational context that buffers the strong negative effects of prohibitive voice on managers' evaluations. By contrast, as managers are more receptive to promotive voice even when it is voiced very frequently, the buffering effect of LMX for promotive voice may be relatively weaker. We therefore predict that the moderating effect of LMX may be stronger for prohibitive voice than for promotive voice. Taken together, we hypothesize:

Hypothesis 2c: The moderating effect of LMX on the curvilinear link between prohibitive voice and managers' evaluations is stronger than that between promotive voice and managers' evaluations.

The Mediating Role of Manager-Perceived Voice Constructiveness

Central to our arguments is the idea that voice frequency, voice content, and LMX may jointly shape managers' cognitive assessments of voiced issues and that such cognitive

assessments translate into how managers evaluate employees. In this section, we delve further into this cognitive process. Indeed, the recent development of social persuasion theory has highlighted the critical role of cognitive processes underlying the effects of different types of persuasion information on message recipients' attitude formation and change (Bohner & Dickel, 2011). Albarracín (2002) proposed the cognition in persuasion model, an extension of social persuasion theory, to argue that message characteristics (e.g., voice content) and peripheral information cues (e.g., voicer characteristics and voicing context) tend to jointly affect message recipients' assessments of the messages' beneficial outcomes, which form an important basis for their favorable or unfavorable reactions to persuasion. For instance, in their seminal work on cognitive processes of social persuasion, Albarracín and Wyer (2001) demonstrated that although message characteristics, such as the strength of arguments, tend to induce message receivers' positive assessments of the messages' personal and social benefits, persuasion context (e.g., presence or absence of distraction) can alter these assessments, which in turn influence their subsequent behavioral reactions (i.e., accepting the messages or not).

Following the same line of reasoning as that of the cognition in persuasion model, Whiting et al. (2012) contended and demonstrated that the positive effects of voicer characteristics, voice content, and voicing context on managers' evaluations of voicers are mediated by a key cognitive process, manager-perceived voice constructiveness - the extent to which managers view the voiced issues as making positive contributions to the organization. We thus posit that the frequency of promotive/prohibitive voice and LMX should interact to generate managers' judgments either for or against the constructiveness of voiced issues. When challenging voice occurs in dyads with high LMX, such a favorable relational context is likely to cause managers to judge their ingroup employees' voice as constructive, irrespective of its frequency level and content. By contrast, in low LMX dyads,

we anticipate that supervisors' judgments of voice constructiveness from outgroup members is shaped by information cues drawn from subordinates' voice frequency and how they frame the content. Hence, following our earlier arguments, in low LMX contexts, we expect an inverted U-shaped relationship between frequency of promotive/prohibitive voice and manager-assessed voice constructiveness. Taken together, we expect similar quadratic-by-linear interactive effects of promotive/prohibitive voice frequency and LMX on manager-perceived voice constructiveness as those on managers' evaluations, as we predicted in Hypotheses 2a to 2c. We also expect that, at high frequency levels, LMX may play a more important role in buffering the negative effect of prohibitive voice than that of promotive voice on managers' judgments of the beneficial outcomes of voiced issues.

> *Hypothesis 3a: LMX moderates the curvilinear link between the frequency of promotive voice and manager-perceived voice constructiveness, in that the positive relationship between promotive voice and voice constructiveness is more likely to become negative at high frequencies of voice in low LMX dyads than in high LMX dyads.*
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> *Hypothesis 3b: LMX moderates the curvilinear link between the frequency of prohibitive voice and manager-perceived voice constructiveness, in that the positive relationship between prohibitive voice and voice constructiveness is more likely to become negative at high frequencies of voice in low LMX dyads than in high LMX dyads.*
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> *Hypothesis 3c: The moderating effect of LMX on the curvilinear link between prohibitive voice and manager-perceived voice constructiveness is stronger than that between promotive voice and manager-perceived voice constructiveness.*

According to the cognition in persuasion model, a judgment that a persuasive message is beneficial is critical in translating persuasion effort into attitude change (Albarracín & Wyer, 2001). Indeed, managers' favorable cognitive judgment of voiced issues is at the core of our theoretical reasoning for the joint effect of voicer characteristic, voice content, and voicing context on managers' responses. If our key logic is correct, we would expect that manager-perceived voice constructiveness should mediate the quadratic-by-linear interactive effects of promotive/prohibitive voice and LMX managers' evaluations of voicing

employees.

Hypothesis 4a: LMX moderates the curvilinear indirect effect of the frequency of promotive voice on managers' evaluations of voicing employees, as mediated by manager-perceived voice constructiveness. This indirect effect is stronger under conditions of lower than higher LMX.

Hypothesis 4b: LMX moderates the curvilinear indirect effect of the frequency of prohibitive voice on managers' evaluations of voicing employees, as mediated by manager-perceived voice constructiveness. This indirect effect is stronger under conditions of lower than higher LMX.

Hypothesis 4c: LMX has a stronger moderating effect on the indirect effect of prohibitive voice than on that of promotive voice on managers' evaluations of voicing employees, as mediated by manager-perceived voice constructiveness.

Overview of Studies

We conducted three studies to progressively test our model. In Study 1, using a Chinese sample, we tested the quadratic-by-linear interactive effects of promotive/prohibitive voice frequency and LMX on managers' evaluations of voicers (Hypotheses 1a-1c and 2a-2c). In Study 2, to address potential for common source bias (i.e., voice and managers' evaluations were all rated by managers) and the cross-cultural generalizability of our model, we replicated Study 1 by asking employees rather than supervisors to report promotive/prohibitive voice frequencies and by using a sample collected from the United States. In Study 3, using another U.S. sample, we examined the complete model by testing the mediating role of voice constructiveness. In the voice literature, managerial evaluations of voicing employees have been widely used to reflect the extent to which managers reward voice behaviors. This construct has been operationalized in terms of manager-assessed employee promotability and their evaluations of employees' overall performance (Burris, 2012; Burris et al., 2013; Maynes & Podsakoff, 2014; Whiting et al., 2008, 2012). We therefore followed this literature to examine both promotability (Studies 1 and 2) and manager-rated overall performance evaluations (Study 3).

Study 1

Method

Sample and procedure. We conducted Study 1 in a state-owned commercial bank in a northern city of China (the data presented in this study were part of a broader data collection effort, see Transparency Appendix). This study received approval from the ethics committee with the project code 592913 (Title: Back Stabbing and Supervisory Retaliation: Consequences of Skip-level Voice) at The Hong Kong Polytechnic University. Respondents were front-line employees and their supervising managers from the retail banking and the counter service in different branches of the bank. Their main job responsibility was to provide customers with financial services, such as transactional accounts, personal loans, and mortgages. HR managers of the bank helped us invite all employees and immediate supervisors from 31 branches to participate in our survey. And all these employees and supervisors were informed that participation was voluntary and confidentiality was ensured. Each supervisor supervised 3 to 7 employees. The fourth author and his assistants conducted the pencil and paper surveys in each branch in two time waves. At Time 1, supervising managers were asked to report employees' promotive voice and prohibitive voice, and employees were asked to rate LMX with their supervising managers. We also collected data on the control variables at Time 1. When we executed the surveys during working hours, subordinates were asked to gather in a meeting room in groups. They received a questionnaire, a return envelope, and a letter of introduction. Their immediate supervisors were asked to answer a separate questionnaire in another meeting room. To ensure confidentiality, respondents were instructed to seal the completed questionnaires in the return envelopes and return them directly to the researchers on site. At Time 2, three months later, managers were asked to evaluate employees' promotability.

We distributed surveys to 164 employees and 31 supervising managers. The final

sample consisted of 147 employees and 31 managers. The effective response rates were approximately 90% for employees and 100% for managers. For the employee sample, 39.6% were male, and 95.9% had received a college education or above. The mean age and organizational tenure were 27.7 years and 3 years, respectively. For the manager sample, 33.6% were male, and 93.2% had received a college education or above. The mean age and organizational tenure were 35.3 years and 6.6 years, respectively.

Measures. All measures used in this study were developed originally in English. These measures were translated into Chinese and back-translated into English by bilingual experts. The back-translated English version was compared with the original English version for equivalence and agreement (Brislin, Lonner, & Thorndike, 1973). *Promotive voice* and *prohibitive voice* were each measured using a five-item, seven-point scale developed by Liang et al. (2012). A sample item for promotive voice is: "This subordinate raises suggestions to improve the unit's working procedure." A sample item for prohibitive voice is: "This subordinate speaks up honestly with problems that might cause serious loss to the work unit, even when/though dissenting opinions exist" (1 = *never,* 7 = *very often*; $\alpha = .97$, $\alpha = .92$, respectively). Subordinates assessed *LMX* using the five-point LMX-7 scale (Graen & Uhl-Bien, 1995). A sample item is: "How would you characterize your working relationship with your leader?" (1 = *extremely ineffective*, 5 = *extremely effective*; $\alpha = .91$). In Study 1, we captured managers' evaluations of voicing employees in the form of manager-rated promotability of the employees. We assessed promotability using a three-item, seven-point scale adapted from Burris (2012; 1 = *strongly disagree*, 7 = *strongly agree*; $\alpha = .81$). We used two items directly from Burris's measure ("If a position were available, I would recommend this person for a promotion" and "If this person was promoted, I would expect him to perform in his new position"). Since the third item could not fully capture the construct of promotability ("How would you rate this person's performance based on what you know"),

we replaced this third item using a modified one in Chinese. This modified item now reads: "This employee has greater potential to be promoted in the future."

Following previous studies (e.g., Burris, 2012), we controlled for the effects of demographic variables of subordinates (i.e., age, gender, education, and organizational tenure). We also controlled for the effect of employees' past performance, using Motowidlo and Van Scotter's (1994) three-item scale, to rule out the halo effect on supervisors' evaluations of employees' promotability ($\alpha = .97$). In addition, past studies have suggested that managers tend to attribute low performers' proactive behavior as being driven by impression management motives (de Stobbeleir, Ashford, & de Luque, 2010). Therefore, we controlled for supervisors' attribution of employees' voice to impression management motives by using a two-item scale adapted from Lam, Huang, and Snape (2007; $\alpha = .73$)[1].

Results

Before testing our hypotheses, we performed a series of confirmatory factor analyses (CFAs) to examine the measurement model, which included promotive voice, prohibitive voice, LMX, and promotability. Results suggested that the four-factor measurement model yielded a better model fit (CFI = .98, IFI = .98, TLI = .98, RMSEA = .05) than the three-factor model that combined both types of voice into one factor (CFI = .89, IFI = .89, TLI = .88, RMSEA = .11), with a significant chi-square difference ($\Delta\chi^2(3) = 273.91$); or the two-factor model with two types of voice as one factor, and LMX and promotability combined as the other factor (CFI = .78, IFI = .78, TLI = .75, RMSEA = .16; $\Delta\chi^2(5) = 518.38$); or finally,

[1] To examine the robustness of our findings, we controlled for different sets of variables across the three studies. We then performed additional tests to see whether we would obtain different results by removing the control variables in the three studies. If we removed all the control variables, we obtained essentially the same results in all three studies. Also, as prior employee performance is strongly related to managers' responses to employee voice across all three studies, we did another set of analyses by controlling for prior performance only. Again, we found essentially the same results in all three studies.

the single-factor model (CFI = .53, IFI = .54, TLI = .47, RMSEA = .24; $\Delta\chi^2(6) = 1142.25$).

Descriptive statistics and correlations for the study variables are presented in Table 1. The sample of Study 1 had a nested data structure: Employees were nested within supervisors of their work groups. We calculated ICC_1 from a one-way random-effects ANOVA model with Bartko's (1976) formula. The ICC_1 for promotability was .27 ($p < .001$), suggesting substantial variance of promotability at the group level. Therefore, we employed multilevel analysis to test the model to control for between-group variances (Raudenbush & Bryk, 2002). We centered the independent variable at its grand means before evaluating the regression equations (cf. Aiken & West 1991; Cohen, Cohen, West, & Aiken, 2003). And we used this centering procedure in all three studies.

Hypotheses 1a and 1b predicted that the frequencies of promotive and prohibitive voice, respectively, have inverted U-shaped relationships with managers' evaluations of voicing employees. As shown in Model 1 of Table 2, we entered the control variables in the first step. Employee gender ($\beta = -.30$, $p < .05$), employee past performance ($\beta = .76$, $p < .001$), and manager's attribution ($\beta = -.15$, $p < .05$) were significantly related to manager-rated promotability. In Model 2, we entered promotive voice and prohibitive voice, which were not significantly related to promotability. In Model 3, we entered the quadratic terms of promotive voice and prohibitive voice, and found that neither promotive voice nor prohibitive voice had a nonlinear relationship with promotability. Thus, Hypotheses 1a and 1b were not supported. Hypothesis 1c predicted that, at high frequency levels, the negative effect of prohibitive voice is stronger than that of promotive voice. As we did not find curvilinear main effects of either promotive voice or prohibitive voice, Hypothesis 1c was not supported.

Next, we tested the moderating effect of LMX on the curvilinear relationship between the frequency of promotive/prohibitive voice and managers' evaluations of voicing employees (Hypotheses 2a and 2b). As presented in Table 2, we entered the moderator LMX

in Model 4 and then the linear interaction of voice frequency (promotive and prohibitive voice) and LMX in Model 5. None of these terms was significant for promotability. In Model 6, the interaction term of quadratic promotive voice and LMX was not significant (β = -.01, *n.s.*), and thus Hypothesis 2a was not supported. Yet, the interaction term of quadratic prohibitive voice and LMX was significant (β = .32, p < .01, ΔR^2 = .15). We thus performed additional analyses to test Hypothesis 2b by examining the simple slopes of the regression lines corresponding to all possible combinations of different frequency levels of prohibitive voice with high and low levels of LMX (cf. Aiken & West, 1991). Results of simple slope tests (Table 3) showed that, in the case of high LMX, the simple slope of the regression lines was significant for promotability only at a very high frequency level (β = .97, p < .05, 2SD above the mean). By contrast, in the case of low LMX, the very low (β = 1.79, p < .01, 2SD below the mean) and low frequencies of prohibitive voice (β = .96, p < .01, 1SD below the mean) were positively related to promotability; the medium (β = -.14, *ns*) and high (β = -.69, *n.s.*, 1SD above the mean) voice frequencies were not significantly related to promotability; and the very high frequency of prohibitive voice (β = -.85, p < .05, 2SD above the mean) was negatively related to promotability. To facilitate the interpretation of this quadratic-by-linear interaction effect, we visualize the interaction in Figure 2A. As shown in the figure, when LMX was high, the effect of prohibitive voice became positive rather than negative at the very high frequency level. When LMX was low, there was an inverted U-shaped relationship between the frequency of prohibitive voice and promotability. Thus, Hypothesis 2b was supported.

Hypothesis 2c predicts that the moderating effect of LMX on the curvilinear linkage between prohibitive voice and managers' evaluations is stronger than that between promotive voice and managers' evaluations. To compare the moderating effects of LMX on these two linkages, we performed a relative weight analysis (Johnson, 2000) by using RWA-Web

(Tonidandel & LeBreton, 2015). Confidence intervals (95% CIs) for the relative weight of each interactive effect and all corresponding significance tests were based on bootstrapping with 10,000 replications. The results indicated that the quadratic-by-linear effect of prohibitive voice and LMX was the most salient predictor, explaining roughly 35% of the variance of promotability (Relative Weight [RW] = .35; [.02, .15]). Moreover, a relative comparison analysis showed that the relative weight for the quadratic-by-linear interactive effect of prohibitive voice and LMX (RW = .35) was significantly different from the relative weight for the quadratic-by-linear interactive effect of promotive voice and LMX (RW = .05; [-.13, -.02]). Therefore, Hypothesis 2c was supported.

Discussion

In summary, in Study 1 we did not find any significant main curvilinear effects of the frequency of promotive and prohibitive voice on manager-rated promotability (Hypotheses 1a, 1b, and 1c), but we did find support for Hypotheses 2b and 2c. Specifically, we found robust results for the inverted U-shaped link between voice frequency and promotability under the condition of low rather than high LMX, and for prohibitive voice rather than promotive voice. Study 1 had two weaknesses, however. First, the independent variable and the outcome variable were both rated by supervisors, leading to a concern about common source bias, even though we used a time-lagged design. Second, we collected data from China, which has a large power distance culture (Hofstede, 2001) that may predispose employees to remain silent in organizations and managers to be less tolerant of employees' challenging voice (Huang, Van de Vliert, & Van der Vegt, 2005). We therefore conducted Study 2 to address these two concerns.

Study 2

Method

Sample and Procedure. We followed the same procedure as in Study 1 to conduct a

two-wave survey with a four-week lag from a large information technology company in the United States. But unlike in Study 1, in which we asked supervisors to report employee voice, in Study 2, we asked employees to report promotive voice and prohibitive voice to address potential common method bias. This study was conducted under Institutional Review Board Protocol #14286 (Title: Investigating Manager-subordinate Relationships from the Manager Lens) at University of Nebraska-Lincoln. We first obtained a letter of support from the Company's Chief Operating Officer and then invited participants to complete paper-and-pencil surveys during working hours. All invited participants were briefed about the purpose and procedures of this survey study. And all these employees and supervisors were informed that participation was voluntary and confidentiality was ensured. On average, the managers' span of control was about 8 people (ranging from 4 to14). Individuals were nested in teams which typically specialized in the same functional area, or similar/relevant areas. We invited 779 employees and 97 supervising managers from the same location to participate in our survey. Respondents were from different functional teams (e.g., business operations, data service consulting, cloud operations, small business solutions, mobile solutions, global sales, enterprise application services, and brand communication). The final sample consisted of 289 employees and 48 managers. The effective response rates were approximately 37.1% for employees and 49.5% for managers. For the employee sample, 40.8% were male, and 25.6% held a master's degree or above. The mean age and organizational tenure of the employees were 29.8 and 4.6 years, respectively. For the manager sample, 70.9% were male, and all manager respondents held a bachelor's degree or above. The mean age and organizational tenure of the manager sample were 38.2 and 11.7 years, respectively.

Measures. We used the same measures as those in Study 1, except that we used a different measure for promotability. The Cronbach's alpha coefficient was .81 for promotive voice, .87 for prohibitive voice, and .88 for LMX. We used only two items from Burris's

(2012) measure of promotability and removed the third item, which focused on overall performance. The Cronbach's alpha coefficient was .92. Like in Study 1, we controlled for employees' demographic variables past performance (α = .91). We did not control for impression management because we were not allowed to add additional variables into our questionnaires and because impression management did not substantially affect our results.

Results

We performed a series of CFAs to examine the measurement model. Similar to Study 1, the results suggested that the four-factor measurement model yielded a better model fit (CFI = .99, IFI = .99, TLI = .99, RMSEA = .03) than the three-factor model (CFI = .83, IFI = .83, TLI = .81, RMSEA = .10), with a significant chi-square difference ($\Delta\chi^2(3) = 602.12$); or the two-factor model (CFI = .54, IFI = .54, TLI = .48, RMSEA = .17; $\Delta\chi^2(5) = 1335.00$); or finally, the single-factor model (CFI = .37, IFI = .37, TLI = .29, RMSEA = .20; $\Delta\chi^2(6) = 1847.69$). Descriptive statistics and correlations for the variables are presented in Table 4. This sample also had a nonindependent data structure. The ICC1 for promotability was .30 ($p < .001$). Therefore, we employed multilevel analysis to test the model.

We followed the same procedure as that in Study 1 to test the hypotheses. As shown in Table 5 (Model 3), promotive voice did not have a significant nonlinear effect on promotability. Therefore, Hypothesis 1a was not supported. In contrast, the quadratic term of prohibitive voice was negatively related to promotability (β = -.17, $p < .01$). The simple slopes of the regression line for promotability at the very low, low, medium, high, and very high frequency levels of prohibitive voice (β = 1.29, $p < .001$; β = .82, $p < .001$; β = .34, $p < .001$; β = -.14, n.s.; β = -.61, $p < .001$) indicated an inverted U-shaped relationship. These findings lent support for Hypothesis 1b. The fact that we found a significant inverted U-shaped relationship for prohibitive voice but not for promotive voice also lent initial support

for Hypothesis 1c.

As shown in Model 6 of Table 5, we did not find a significant quadratic-by-linear interactive effect of promotive voice and LMX on promotability. Thus, Hypothesis 2a was not supported. We did find, however, that the quadratic-by-linear interaction of prohibitive voice and LMX was significant for promotability ($\beta = .09$, $p < .05$, $\Delta R^2 = .04$). As shown in Table 3, simple slope tests found a significant inverted U-shaped link between prohibitive voice and promotability in low rather than high LMX dyads (also see Figure 2B). These findings again supported Hypothesis 2b. Also, LMX was found to moderate the curvilinear effect of prohibitive voice rather than that of promotive voice on managers' evaluations, which lent initial support to Hypothesis 2c. We then performed a relative importance test by using RWA-Web (Tonidandel & LeBreton, 2015), as we did in Study 1, to further confirm Hypotheses 1c and 2c. Results indicated that the quadratic effect of prohibitive voice explained more variance of promotability (RW = .15) than the quadratic effect of promotive voice did (RW = .03; [-.08, -.01]), thereby supporting Hypothesis 1c. Moreover, the quadratic-by-linear interactive effect of prohibitive voice and LMX (RW = .22) explained significantly more variance of promotability than the quadratic-by-linear interactive effect of promotive voice and LMX did (RW = .06; [-.09, -.02]), lending support to Hypothesis 2c.

Discussion

Using employee-rated voice behavior in Study 2, we not only replicated the significant results reported in Study 1 that supported Hypotheses 2b and 2c, but also found new evidence to support Hypotheses 1b and 1c. The key limitation of Studies 1 and 2, however, is that we did not examine the mediating effect of manager-perceived voice constructiveness. We therefore conducted Study 3 to test this mechanism using another sample.

Also, in Study 3, we attempted to address three additional methodological limitations

of Studies 1 and 2. First, the differences in the results of Studies 1 and 2 could have been caused by either cultural differences (China vs. the United States) or differences in how voice was measured (manager-rated vs. employee-rated voice). Hence, in Study 3, using another U.S. sample (holding national culture constant), we measured challenging voice using manager-rated voice, which is more in line with our theory: Managers should be aware of the frequency of employees' challenging voice. Second, in Studies 1 and 2, we examined manager-rated promotability as the indicator of managers' evaluations. Although promotability may reflect managers' evaluations of employees, it is important to examine whether our model can be extended to predict managers' evaluations of employees' overall performance, because past studies have used overall performance as another major indicator of managers' evaluations of employees (Burris, 2012; Burris et al., 2013; Maynes & Podsakoff, 2014; Whiting et al., 2008, 2012). Hence, in Study 3, we used manager-rated overall performance of voicing employees as the dependent variable. Third, one possible criticism of Studies 1 and 2 is that the results may have been confounded with some individual difference variables of both subordinates and supervisors, such as subordinates' proactivity and managers' negative affectivity and openness to voice. In Study 3, we tested our model by controlling additional individual difference variables.

Study 3

Method

Sample and procedure. We invited employees and their supervising managers working at a large financial services company in the United States to participate in this study. This study was conducted under Institutional Review Board Protocol #16-438 EP1703 (Title: The Impact of Prosocial Behaviors on Workplace Outcomes) at Auburn University. We first obtained a letter of support from the company's HR Department and then invited participants to complete on-line surveys. All invited participants were briefed about the purpose and

procedures of this survey study. In addition, all these employees and supervisors were informed that participation was voluntary and confidentiality was ensured. The managers' average span of control was 8.8 people, ranging from 5 to 14. Individuals were nested in teams specializing in the same functional area, or similar/relevant areas. The invited participants worked in a number of areas, such as home and auto insurance, corporate finance, asset management, financial planning, investment accounting, operations, and communications. Survey data were collected in one location at two time points that were separated by approximately four weeks. At Time 1, we invited 565 employees to answer questions about their proactive personality and LMX. We received 392 completed questionnaires (69.4%). We then asked the 63 supervising managers of these 392 employee respondents to answer questions about their subordinates' past performance, voice constructiveness, promotive voice, and prohibitive voice, as well as their own negative affect and openness. We collected 206 matched questionnaires from 46 supervising managers (73.0%). At Time 2, we asked those 46 manager respondents to rate their subordinates' overall performance. All 46 managers returned their questionnaires (100%). Therefore, our final sample consisted of 206 employees nested under 46 supervising managers. Of these 206 employees, 47.6% were female and 28.2% held a master's degree or above. The average age and organizational tenure were 34.3 and 5.6 years, respectively. The average dyadic tenure was 3.6 years. For the manager sample, 30.4% were female, and all of them held a master's degree or above. The average age and organizational tenure were 41.6 and 12.9 years, respectively.

Measures. *Promotive voice* (α = .91), *prohibitive voice* (α = .92), and *LMX* (α = .96) were all measured using the same scales as those used in Studies 1 and 2. *Voice constructiveness* was adopted from Whiting et al.'s (2012) measure, which originated from Gorden (1988). The items are: "This employee's suggestions/comments are likely to enhance

the performance of his/her work group," and "This employee's suggestions/comments are constructive" (α = .84; 1 = *strongly disagree*, 7 = *strongly agree*). *Overall performance evaluation* was measured using a three-item scale developed by MacKenzie, Podsakoff, and Fetter (1991). A sample item is: "All things considered, this employee performs his/her job the way I like to see it performed" (α = .88; 1 = *strongly disagree*, 7 = *strongly agree*).

We also controlled for a number of variables in addition to the demographic variables. First, we controlled for employees' *proactive personality* (six-item scale, α = .89; Parker, 1998), which has been found to significantly predict employee voice (Detert & Burris, 2007; Seibert et al., 2001). Second, we controlled for managers' ratings of employees' *past performance* (three-item scale, α = .89; MacKenzie et al., 1991), managers' *negative affect* (five-item scale, α = .82; Thompson, 2007), and managers' *openness* (two-item scale, α = .88; Gosling, Rentfrow, & Swann, 2003), which were all found to be significantly related to managers' evaluations of employees (Detert & Burris, 2007; Tangirala & Ramanujam, 2012).

Results

We performed a series of CFAs to examine the measurement model, which included promotive voice, prohibitive voice, LMX, manager-perceived voice constructiveness, and manager-rated overall performance. Results suggested that the five-factor measurement model yielded a better model fit (CFI = .96, IFI = .96, TLI = .95, RMSEA = .06) than the four-factor model that combined both types of voice into one factor (CFI = .80, IFI = .80, TLI = .78, RMSEA = .12), with a significant chi-square difference ($\Delta\chi^2(4) = 480.23$); or the four-factor model that combined voice constructiveness and overall performance into one factor (CFI = .90, IFI = .90, TLI = .87, RMSEA = .09; $\Delta\chi^2(4) = 166.81$); or the three-factor model with the two types of challenging voice combined into one factor, voice constructiveness and overall performance combined into one factor, and LMX as one factor (CFI = .75, IFI = .75,

TLI = .72, RMSEA = .14; $\Delta\chi^2(7) = 647.03$); or the two-factor model with the two types of voice as one factor and all the others as the other factor (CFI = .81, IFI = .81, TLI = .79, RMSEA = .12; $\Delta\chi^2(9) = 453.73$); or finally, the single-factor model (CFI = .48, IFI = .48, TLI = .42, RMSEA = .19; $\Delta\chi^2(10) = 647.03$). Descriptive statistics and correlations for the study variables are presented in Table 6. Again, the sample had a non-independent data structure. The ICC1 was .18 for manager-rated overall performance ($p < .01$). Therefore, we employed multilevel analysis to test the model.

We first tested Hypotheses 3a and 3b, which predicted quadratic-by-linear interactive effects of the two types of challenging voice and LMX on the mediator: manager-perceived voice constructiveness. As shown in Table 7 (Model 6), we found a nonsignificant quadratic-by-linear interactive effect of promotive voice and LMX, but a significant quadratic-by-linear interactive effect of prohibitive voice and LMX on voice constructiveness ($\beta = .34$, $p < .001$, $\Delta R^2 = .09$). Simple slope tests presented in Table 9 and the plot of this interaction in Figure 3A showed a similar pattern of interactions as those found in Studies 1 and 2. Hence, while Hypothesis 3a was not supported, Hypothesis 3b was supported. We then performed a relative importance test by using RWA-Web (Tonidandel & LeBreton, 2015) to test Hypothesis 3c. The results revealed that the quadratic-by-linear interactive effect of prohibitive voice and LMX explained significantly more variance of voice constructiveness (RW = .70) than the quadratic-by-linear interactive effect of promotive voice and LMX did (RW = .23; [-.19, -.01]), thus supporting Hypothesis 3c.

We followed the same procedures as those in Studies 1 and 2 to test the effect of voice frequency on the dependent variable: manager-rated overall performance. As presented in Model 3 of Table 8, neither promotive voice nor prohibitive voice had a nonlinear relationship with overall performance. Thus, Hypotheses 1a, 1b, and 1c were not supported.

Also, we did not find a significant quadratic-by-linear interactive effect of promotive voice and LMX on overall performance. Thus, Hypothesis 2a was not supported. This finding also led to the rejection of Hypothesis 4a that predicts a mediating role of voice constructiveness for the effect of promotive voice. Notably, however, we found a significant linear interactive effect of promotive voice and LMX on overall performance ($\beta = .21$, $p < .05$; Model 5 of Table 8). This finding suggests that the positive relationship between promotive voice frequency and manager-rated overall performance is stronger in high than in low LMX dyads.

As shown in Model 6 of Table 8, we found that the quadratic-by-linear interaction of prohibitive voice and LMX was significant ($\beta = .20$, $p < .05$, $\Delta R^2 = .04$). Simple slope tests presented in Table 9 and the plot of this interaction in Figure 3B show an inverted U-shaped link between frequency of prohibitive voice and overall performance when LMX is low rather than high, lending support to Hypothesis 2b. Also, in support of Hypothesis 2c, the relative importance test by using RWA-Web (Tonidandel & LeBreton, 2015) revealed that the quadratic-by-linear interactive effect of prohibitive voice and LMX explained significantly more variance of overall performance (RW = .63) than the quadratic-by-linear interactive effect of promotive voice and LMX did (RW = .07; [-.18, -.01]).

Next, we tested the effect of voice constructiveness on overall performance after including the linear and squared terms of voice, LMX, and the respective interaction terms. As shown in Model 7 of Table 8, the coefficient for voice constructiveness was significant for overall performance ($\beta = .16$, $p < .05$), while the quadratic-by-linear interaction of prohibitive voice and LMX became nonsignificant. These findings provided initial support for the meditating role of voice constructiveness for prohibitive voice (Hypothesis 4b).

To further test Hypothesis 4b, we performed Selig and Preacher's (2008) Monte Carlo analysis to examine the moderated mediation model for prohibitive voice. As shown in Table 10, when LMX was low, the very low ($\beta = .22$, $p < .05$) and low ($\beta = .10$, $p < .05$)

frequencies of prohibitive voice were positively and indirectly related to manager-rated overall performance through voice constructiveness; the medium frequency of prohibitive voice (β = -.02, *ns*) was not significantly related to performance; and the high (β =-.14, p < .05) and very high (β = -.26, p < .05) frequencies of prohibitive voice were negatively and indirectly related to performance through voice constructiveness. In contrast, when LMX was high, voice constructiveness did not mediate the effect of prohibitive voice on overall performance. These findings supported Hypothesis 4b. Our finding that LMX moderated the mediating effect of voice constructiveness only for prohibitive voice and not for promotive voice provided support for Hypothesis 4c.

Discussion

In Study 3, we not only replicated the findings of Studies 1 and 2 that supported Hypotheses 2b and 2c, but also obtained empirical evidence supporting Hypotheses 3b, 3c, 4b, and 4c. These findings support our key proposition that the frequencies of challenging voice, voice content, and LMX context jointly predict managers' evaluations of voicing employees through influencing how managers perceive the constructiveness of voice. In Study 3, the pattern of the interactive effects of prohibitive voice and LMX on manager-perceived voice constructiveness and manager-rated overall performance was very similar to the pattern of those effects on manager-rated promotability found in Studies 1 and 2. This result remained robust even when we included a few more control variables, such as employee proactivity, managers' openness, and managers' negative affect.

Overall Discussion

The central contention of the current research is that the frequency of challenging voice and managers' evaluations of voicing employees are not related in a linear manner, as previously assumed (Burris, 2012). Rather, as findings across our three studies have largely supported, there exists an inverted U-shaped relationship between the frequency of

challenging voice and managers' ratings of voicers' promotability (Studies 1 and 2) and their overall performance evaluations (Study 3), especially when the content of challenging voice is prohibitive rather than promotive in nature and when the voicers have a low rather than high level of LMX with managers. In Study 3, we also found that, in the case of low LMX, manager-perceived voice constructiveness mediated the curvilinear effect of prohibitive voice on manager-rated overall performance of voicers. A summary of our findings is shown in Table 11. In general, 6 out of the 12 hypotheses (Hypotheses 2b, 2c, 3b, 3c, 4b, and 4c) were supported across three studies, and two hypotheses (Hypotheses 1b and 1c) received support only in Study 2[2].

The findings of our study provide initial evidence for the curvilinear effect of challenging voice, and therefore, they have several important implications for research on employee voice. First, drawing from social persuasion theory (e.g., Briñol & Petty, 2009; Eagly & Chaiken, 1998), we extended Whiting et al.'s (2012) experimental work on managers' responses to voice by examining the joint effects of the frequency of voice (source characteristic), content of challenging voice (message characteristic), and relational context of LMX (context characteristic) that are relevant to organizational settings. Frequency of challenging voice provides signals to managers about voicing employees' degree of effort to initiate changes for the organization functioning. Promotive voice and prohibitive voice capture major contents of challenging voice (Liang et al., 2012). LMX serves as a salient boundary condition that reflects the relational context for voice behavior. Results across the

[2] To examine whether the samples of three studies had sufficient statistical power to replicate the complex model, we followed the procedure suggested by Faul, Erdfelder, Lang, and Buchner (2007) to perform a set of post hoc power analyses in all three samples. Specifically, we tested the statistical power for the moderating effects of LMX on the curvilinear link between promotive/prohibitive voice frequency and managers' evaluations. Results showed a sufficient statistical power for all three studies (Study 1 = .99; Study 2 = .99, Study 3 = .82, all above the threshold of .80).

three independent samples consistently showed that these three variables jointly predict the extent to which managers reward voicing employees by giving them positive evaluations.

Second, our findings suggest that the mixed results regarding the consequences of challenging voice reported in the literature can be explained not only by identifying its boundary conditions but also by modeling a nonlinear effect of the frequency of voice. Specifically, some previous studies have reported that challenging voice sometimes receives positive reactions (Burris, 2012; Whiting et al., 2012), while other studies have reported that it receives negative reactions (Burris, 2012; Seibert et al., 2001) or even no reaction (Van Dyne & LePine, 1998) from managers. Assuming a linear effect of challenging voice on managers' evaluations of voicing employees, several studies have advanced our understanding of the boundary conditions of the consequences of challenging voice by identifying certain moderators, such as different features of voice content (Burris, 2012; Chamberlin et al., 2017; Maynes & Podsakoff, 2014; Whiting et al., 2012) and recipients' characteristics (Fast, Burris, & Bartel, 2014; Whiting et al., 2012). Departing from this linear approach to understanding the consequences of voice, our studies have demonstrated the critical yet overlooked role of the frequency of challenging voice and its nonlinear effect on managers' evaluations of voicing employees. To develop more precise predictions of the consequences of challenging voice, future research should model this nonlinear effect of voice frequency.

Third, consistent with social persuasion theory (Briñol & Petty, 2009) and findings of previous studies on the consequences of voice (Burris, 2012; Chamberlin et al., 2017; Maynes & Podsakoff, 2014), we found that the content of challenging voice plays an important role in determining managers' evaluations. In addition to taking the content of challenging voice (promotive and prohibitive) into account as Chamberlin et al. (2017) suggested, our results show that it is also important to model the differential effects of the

two types of voice in a nonlinear manner. Indeed, across the three studies, we found a significant quadratic-by-linear interactive effect of prohibitive voice and LMX on managers' evaluations, while we did not find a nonlinear effect of promotive voice in either high or low LMX dyads. In other words, the hypothesized inverted U-shaped effect can be observed for prohibitive voice but not for promotive voice in low LMX dyads. While Chamberlin et al.'s (2017) meta-analytical study clearly shows that prohibitive voice tends to lead to managers' negative evaluations in general, our nonlinear model has further advanced our understanding of managers' responses to prohibitive voice by showing that managers may appreciate prohibitive voice from outgroup members when these employees refrain from speaking out very frequently.

It is theoretically interesting to contemplate why we did not find consistently significant effects of promotive voice. Since promotive voice focuses on suggesting solutions and new ideas, perhaps the quality of these solutions and ideas may be more critical in affecting managers' evaluations of their constructiveness as well as their evaluations of the voicing employees. It is easier to point out problems than to come up with good solutions. Thus, it is possible that promotive voice induces managers' positive evaluation primarily for those voicers who often come up with high-quality suggestions. Indeed, in Study 3, we found a significant linear interaction of promotive voice and LMX, in that the positive effect of promotive voice frequency on manager-rated overall performance is stronger in high LMX dyads than in low ones. This is perhaps because managers tend to make positive assessments of the voice quality of ingroup members. As LMX may not fully capture the quality of voice from ingroup employees, we did not find this linear interaction consistently across the three samples. To confirm this speculation, future research should directly examine whether the effect of promotive voice is shaped by moderators, such as perceived quality of voice.

Fourth, our findings highlight the role of LMX in shaping the consequences of

challenging voice for managers' evaluations of voicers. Social persuasion theory suggests that people are more likely to accept influence from their ingroup members than from outgroup members (e.g., Briñol & Petty, 2009; Clark & Maass, 1988; Crano & Chen, 1998; Menon & Blount, 2003). Across all studies, we found that LMX was strongly and positively correlated with managers' evaluations of employees and perceptions of voice constructiveness. Moreover, the moderating effects of LMX found in the three studies point to the overriding role of LMX in shaping managers' positive responses to challenging voice. It therefore would be desirable for future research to take into account the influence of LMX when investigating the consequences of challenging voice for managers' evaluations.

Fifth, Study 3 demonstrated that manager-perceived voice constructiveness is a key mechanism that may help explain the joint effects of voice frequency, voice content, and LMX on managers' evaluations. Also, as shown in Table 10, LMX had a strong main effect on voice constructiveness, corroborating our key logic: Relational contexts shape managers' cognitive assessments of the beneficial outcomes of voice, which in turn influences managers' responses. These findings extend the cognition in social persuasion model to organizational settings (Albarracín, 2002, Albarracín, & Wyer, 2001; Hart et al., 2009), by suggesting that managers' cognitive evaluations of the benefits of voiced issues are a salient mechanism explaining the consequences of challenging voice in organizations.

Finally, in Studies 2 and 3, we tested our proposed model using U.S. samples and found similar results as those reported in Study 1 that used a Chinese sample. The findings of the three studies offer evidence for the cross-cultural generalizability of our model. Given the large power distance culture of China, subordination is socially expected by both managers and employees (House, Hanges, Javidan, Dorfman, & Gupta, 2004). One could argue that, in such a context, Chinese managers may be less accepting of challenging voice from employees than are their counterparts in the West. Likewise, managers from a small-power-

distance culture may not see engaging in challenging voice as an act of insubordination; instead, they may regard such behavior as constructive to organizations. Countering these views, we indeed found a significant main curvilinear effect of prohibitive voice in Study 2 and a significant quadratic-by-linear interactive effect of prohibitive voice and LMX in Studies 2 and 3. These findings suggest that U.S. managers, like their Chinese counterparts, do not tolerate high frequency prohibitive voice from outgroup employees. Although we are not entirely certain that our findings can be generalized to nations other than China and the United States, based on our theoretical reasoning and the robust empirical findings, we do expect that this curvilinear effect of challenging voice would be found in different cultures in future research.

Limitations and Future Research

Despite the strengths of using three independent samples, time-lagged surveys in all studies, and both supervisor-rated (Studies 1 and 3) and subordinate-rated (Study 2) voice, our research has three limitations. First, in Studies 1 and 3, our independent variables, the mediator, and the dependent variables came from the same source: the supervisors. This may raise concerns about common method bias. To partially address this limitation, we used subordinate-reported measures of challenging voice in Study 2 and found results similar to those in Studies 1 and 3. Using subordinate-rated voice remains problematic too, however. It is methodologically reasonable to ask supervisors to report their perceived employees' voice behavior. In reality, managers sometimes may not be aware of employees' voice behavior. More important, according to our theorization, managers' evaluations of voicing employees are driven by their observations of particular employees' frequency of voice. To establish this relationship, we need to make sure that managers are aware of their employees' voice behavior. If we ask employees to report their own voice behavior, we cannot fully capture managers' perceived frequency. To accurately measure employee voice while also avoiding

common source problems, future research should consider using lab-based studies to manipulate employee voice frequency.

Second, managers' evaluations of promotability, overall performance, and voice constructiveness could be influenced by another key voice characteristic: the quality of voice. Quality of messages, which is often operationalized in terms of the strength of arguments, has been widely used in experimental settings to predict message receivers' reactions to a single "incident" of persuasion (Briñol & Petty, 2009; Eagly & Chaiken, 1998). In organizational settings, however, managers' evaluations of voicing employees are less likely to be influenced by the quality of a single incident of voice. Also, it is difficult to judge the quality of voiced messages, because, unlike in experimental settings, it may take time for managers to learn the quality of voice from employees. In field settings, voice quality can be conceptualized as either a *voicer* characteristic or a *voice* characteristic. It is a *voicer* characteristic when it is conceptualized as an employee's "history" of voice quality. It becomes a *voice* characteristic if the quality of voice is conceptualized in terms of whether the voiced issues are within the voicers' functional area of expertise (Dutton & Ashford, 1993). Given its conceptual and operationalization complexity in field settings, we did not incorporate quality of voice in our model. Nevertheless, we encourage future researchers to theorize and investigate how quality of voice plays a role in the nonlinear relationship between frequency of challenging voice and managers' evaluations of voicers.

Finally, voice constructiveness was measured using a two-item scale adopted from Gorden (1988). Although other researchers also have used this scale to capture cognitive processes underlying the effects of voice (e.g. Maynes & Podsakoff, 2014; Whiting et al., 2012), the two-item measure may not fully capture the cognitive assessments of the beneficial outcomes of voice for organizations. Future research should develop a scale that can better reflect this cognitive process.

Our results may suggest some new directions for studying the effects of challenging voice on managers' evaluations of voicers. First, we cast LMX as a key relational context moderator in our model, focusing on how managers respond differentially to ingroup voicers and outgroup voicers. Research studies, however, have suggested that the triadic relationship between a manager, an ingroup subordinate, and an outgroup subordinate can be more complex than previous research on LMX has assumed (Sherony & Green, 2002; Tse, Lam, Lawrence, & Huang, 2013). The manager's responses to the voice behavior of an ingroup subordinate may be influenced by the outgroup subordinate's responses to the voice behavior, or vice versa. Future research could extend our model by examining the potential influences from a third party in the work group. Second, in addition to message, source, and context factors, social persuasion theory also suggests that receiver characteristics play a key role in receivers' reactions to persuasion (McGuire, 1985). Thus, another direction of expanding our model would be to consider a set of managers' key characteristics (receiver factors) such as managers' proactive personality (Parker, 1998), that may influence the curvilinear effects of challenging voice.

Practical Implications

Our findings have several useful implications for practitioners. First, it is essential for subordinates to understand the true risks of voicing out challenging issues to their managers. The findings of the current study suggest that challenging voice, such as prohibitive voice, may not be as risky as previously assumed. A moderate frequency of prohibitive voice can project a positive image to managers, even when the voicing employees are not members of the managers' ingroup. More important, subordinates who have low LMX with their managers should be aware that only very frequent prohibitive voice tends to induce managers' unfavorable responses. Second, in concert with what we know from the LMX and voice literatures, the most effective way for subordinates to influence managers is to develop

high levels of social exchange relationships with them. Third, managers can learn from our study that the frequency of employees' voicing may influence their evaluations of the voiced messages, causing them to overlook some very important issues. Managers tend to have unfavorable evaluations of the voice of outgroup members in general, yet our findings show that managers may indeed appreciate voice from outgroup members when these members voice up challenging issues at a moderate frequency. Managers, however, tend to degrade those outgroup members who voice up challenging issues very frequently. As such, managers may inadvertently discourage outgroup members from raising important issues and miss opportunities to identify critical problems that may affect their organizations' functioning.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.

Albarracín, D. (2002). Cognition in persuasion: An analysis of information processing in response to persuasive communications. *Advances in Experimental Social Psychology* (Vol. 34, 61–130). San Diego, CA: Academic Press.

Albarracín, D., & Wyer, R. S. Jr. (2001). Elaborative and nonelaborative processing of a behavior-related communication. *Personality and Social Psychology Bulletin,* 27, 691-705.

Bartko, J. J. (1976). On various intraclass correlation reliability coefficients. *Psychological Bulletin*, 83, 762-765.

Bohner, G., Dickel, N., 2011. Attitudes and attitude change. *Annual Review of Psychology,* 62, 391-417.

Briñol, P., & Petty, R. E. (2009). Source factors in persuasion: A self-validation approach. *European Review of Social Psychology,* 20, 49-96.

Brislin, R., Lonner, W. J., & Thorndike, R. (1973). *Cross-cultural research methods*. New York: Wiley.

Burris, E. R. (2012). The risks and rewards of speaking up: Managerial responses to employee voice. *Academy of Management Journal,* 55, 851-875.

Burris, R. B., Detert, J. R., & Romney, A. C. (2013). Speaking up vs. being heard: The disagreement around and outcomes of employee voice. *Organization Science,* 24, 22-38.

Chamberlin, M., Newton, D. W., & Lepine, J. A. (2017). A meta-analysis of voice and its promotive and prohibitive forms: Identification of key associations, distinctions, and future research directions. *Personnel Psychology,* 70, 11-71.

Clark, R. D., & Maass, A. (1988). Social categorization in minority influence: The case of homosexuality. *European Journal of Social Psychology,* 18, 347-364.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). London: Lawrence Erlbaum.

Crano, W. D., & Chen, X. (1998). The leniency contract and persistence of majority and minority influence. *Journal of Personality and Social Psychology,* 74, 1437-1450.

de Stobbeleir, K. E. M., Ashford, S. J., & de Luque, M. F. S. (2010). Proactivity with image in mind: How employee and manager characteristics affect evaluations of proactive behaviours. *Journal of Occupational and Organizational Psychology,* 83, 347-369.

Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open? *Academy of Management Journal,* 50, 869-884.

Dutton, J. E., & Ashford, S. J. (1993). Selling issues to top management. *Academy of Management Review,* 18 (3), 397–428.

Eagly, A. H., & Chaiken, S. (1998). Attitude structure and function. In D. T. Gilbert, S. T. Fiske, & G. Lindzey, *The Handbook of Social Psychology* (Vol. 1-2, pp. 269-322). New York, NY: McGraw-Hill.

Eagly, A. Wood, W., & Chaiken, S. (1978). Causal inferences about communicators and their effect on opinion change. *Journal of Personality and Social Psychology,* 36, 424-435.

Fast, N. J., Burris, E. R., & Bartel, C. A. (2014). Managing to stay in the dark: Managerial self-efficacy, ego defensiveness, and the aversion to employee voice. *Academy of Management Journal,* 57, 1013-1034.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods,* 39, 175-191.

Fuller, B., Marler, L. E., Hester, K., & Otondo, R. F. (2015). Leader reactions to follower proactive behavior: Giving credit when credit is due. *Human Relations,* 68, 879-898.

Gorden, W. I. (1988). Range of employee voice. *Employee Responsibilities and Rights Journal,* 1, 283-299. .

Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, *37*(6), 504-528.

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly,* 6, 219-247.

Grant, A. M., Parker, S., & Collins, C. (2009). Getting credit for proactive behavior: Supervisor reactions depend on what you value and how you feel. *Personnel Psychology,* 62, 31-55.

Hart, W., Albarracín, D., Eagly, A. H., Brechan, I., Lindberg, M. J., & Merrill, L. (2009). Feeling validated versus being correct: A meta-analysis of selective exposure to information. *Psychological Bulletin,* 135, 555-588.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks, CA: Sage.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Culture, leadership, and organizations: The globe study of 62 societies.* Thousand Oaks: Sage.

Hovland, C. I., & Mandell, W. (1952). An experimental comparison of conclusion-drawing by the communicator and by the audience. *Journal of Abnormal and Social Psychology,* 47: 581-588.

Howard-Grenville, J. A. (2007). Developing issue-selling effectiveness over time: Issue selling as resourcing. *Organization Science,* 18, 560-577.

Huang, X., Van de Vliert, E., & Van der Vegt, G. (2005). Breaking the culture of silence:

Does the stimulation of participation reduce employee opinion withholding cross-nationally? *Management and Organization Review,* 1, 459-482.

Isenberg, D. J. (1986). Group polarization: A critical review and meta-analysis. *Journal of Personality and Social Psychology,* 50, 1141-1151.

Jones, L. W., Sinclair, R. C., & Courneya, K. S. (2003). The effects of source credibility and message framing on exercise intentions, behaviors, and attitudes: An integration of the elaboration likelihood model and prospect theory. *Journal of Applied Social Psychology,* 33(1), 179-196.

Johnson, J. W. (2000). A heuristic method for estimating the relative weight of predictor variables in multiple regression. *Multivariate Behavioral Research,* 35, 1-19

Lam, C. F., Rees, L., Levesque, L. L., Ornstein, S. (in press). Shooting from the hip: A habit perspective of voice. *Academy of Management Review*.

Lam, W., Huang, X., & Snape, E. (2007). Feedback-seeking behavior and leader-member exchange: Does supervisor-attributed motive matter? *Academy of Management Journal,* 50, 348-363

Levin, I. P., Schneider, S. L., & Gaeth, G. J. (1998). All frames are not created equal: A typology and critical analysis of framing effects. *Organizational Behavior and Human Decision Processes,* 76, 149-188.

Li, A. N., Liang, J., & Crant, J. M (2010). The role of proactive personality in job satisfaction and organizational citizenship behavior: A relational perspective. *Journal of Applied Psychology,* 95, 395-404.

Li, A. N., Liao, H., Tangriala, S., & Firth, B. M. (in press). The content of the message matters: The differential effects of promotive and prohibitive team voice on team productivity and safety performance gains. *Journal of Applied Psychology.*

Liang, J., Farh, C. I. C., & Farh, J. L. (2012). Psychological antecedents of promotive and

prohibitive voice: A two-wave examination. *Academy of Management Journal*, 55, 71-92.

Liden, R. C., Sparrowe, R. T., & Wayne, S. J. (1997). Leader-member exchange theory: The past and potential for the future. In G. R. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 15, 47-119). Greenwich, CT: JAI.

Liden, R. C., Wayne, S. J., & Stilwell, D. (1993). A longitudinal study on the early development of leader-member exchanges. *Journal of Applied Psychology,* 78, 662-674.

MacKenzie, S. B., Podsakoff, P. M., & Fetter, R. (1991). Organizational citizenship behavior and objective productivity as determinants of managerial evaluations of salespersons' performance. *Organizational behavior and human decision processes*, *50*(1), 123-150.

Mason, W. A., Conrey, F. R., & Smith E. R. (2007). Situating social influence processes: Dynamic, multidirectional flows of influence within social networks. *Personality and Social Psychology Review,* 11, 279-300.

Maynes, T. D., & Podsakoff, P. M. (2014). Speaking more broadly: An examination of the nature, antecedents, and consequences of an expanded set of employee voice behaviors. *Journal of Applied Psychology,* 99, 87-112.

McCroskey, J. C. (1969). A summary of experimental research on the effect of evidence in persuasive communication. *Quarterly Journal of Speech,* 55, 169-176. .

McGuire, W. J. (1985). Attitudes and attitude change. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (pp. 233-346). New York, NY: Random House.

Menon, T., & Blount, S. (2003). The messenger bias: A relational model of knowledge valuation. *Research in Organizational Behavior,* 25, 137-186.

Milliken, F. J., Morrison, E. W., & Hewlin, P. F. (2003). An exploratory study of employee

silence: Issues that employees don't communicate upward and why. *Journal of Management Studies,* 40, 1453-1476.

Morrison, E. W. (2014). Employee voice and silence. *Annual Review of Organizational Psychology and Organizational Behavior,* 1, 173-197.

Morrison, E. W., & Milliken, F. J. (2003). Speaking up, remaining silent: The dynamics of voice and silence in organizations. Journal of Management Studies, 40(6), 1353-1358.

Motowidlo, S. J., & Van Scotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology,* 79, 475-480.

Parker, S. K. (1998). Enhancing role breadth self-efficacy: the roles of job enrichment and other organizational interventions. *Journal of Applied Psychology*, *83*(6), 835-852.

Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 19, pp. 123-205). New York: Academic Press.

Petty, R. E., Cacioppo, J. T., & Goldman, R. (1981). Personal involvement as a determinant of argument-based persuasion. *Journal of Personality and Social Psychology,* 41, 847-855.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods (2nd Edition)*. Thousand Oaks: Sage.

Scandura, T. A., & Schriesheim, C. A., (1994). Leader-member exchange and supervisor career mentoring. *Academy of Management Journal,* 37, 1588-1602.

Schilit, W. K., & Locke, E. A. (1982). A study of upward influence in organizations. *Administrative Science Quarterly,* 27, 304-316.

Seibert, S., Kraimer, M., & Crant, J. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology,* 54,

845-874.

Selig, J. P., & Preacher, K. J. (2008). *Monte Carlo method for assessing mediation: An interactive tool for creating confidence intervals for indirect effects* (Computer software). Available from http://quantpsy.org/.

Sherony, K. M., & Green, S. G. (2002). Co-worker exchange: Relationships between co-workers, leader-member exchange, and work attitudes. *Journal of Applied Psychology*, *87*, 542-548.

Tangirala, S., & Ramanujam, R. (2012). Ask and you shall hear (But not always): Examining the relationship between manager consultation and employee voice. *Personnel Psychology,* 65, 251-282.

Thompson, E. R. (2007). Development and validation of an internationally reliable short-form of the positive and negative affect schedule (PANAS). *Journal of cross-cultural psychology,* 38(2), 227-242.

Thomas, J. P., Whitman, D. S., & Viswesvaran, C. (2010). Employee proactivity in organizations: A comparative meta-analysis of emergent proactive constructs. *Journal of Occupational and Organizational Psychology,* 83, 275-300.

Tonidandel. S., & LeBreton, J. M. (2015). RWA web: A free, comprehensive, web-based, and user-friendly tool for relative weight analyses. *Journal of Business Psychology*, 30, 207-216.

Tost, L. P., Gino, F., & Larrick, R. P. (2012). Power, competitiveness, and advice taking: Why the powerful don't listen. *Organizational Behavior and Human Decision Processes,* 117, 53-65.

Tse, H., Lam, C., Lawrence, S., & Huang, X. (2013). When my supervisor dislikes you more than me: The effect of dissimilarity in leader-member exchange on coworkers' interpersonal emotion and perceived help. *Journal of Applied Psychology*, 98, 974-

998.

Uhl-Bien, M., & Maslyn, J. M. (2003). Reciprocity in manager-subordinate relationships: Components, configurations, and outcomes. *Journal of Management,* 29, 511-532.

Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal,* 41, 108-119.

Van Dyne, L., Cummings, L. L., & McLean Parks, J. (1995). Extra-role behaviors: In pursuit of construct and definitional clarity. In L. L.Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 17, pp. 215–285). Greenwich, CT: JAI Press.

Vaniv, I, & Choshen-Hillel, S. (2012). When guessing what another person would say is better than giving your own opinion: Using perspective-taking to improve advice-taking. *Journal of Experimental Social Psychology,* 48, 1022-1028.

Whiting, S. W., Podsakoff, P. M., & Pierce, J. R. (2008). Effects of task performance, helping, voice, and organizational loyalty on performance appraisal ratings. *Journal of Applied Psychology,* 93, 125-139.

Whiting, S. W., Maynes, T. D., Podsakoff, N. P., & Podsakoff, P. M. （2012）. Effects of message, source, and context on evaluations of employee voice behavior. *Journal of Applied Psychology,* 97, 159-182.

Table 1

Means, Standard Deviations, and Correlations among the Variables (Study 1)

	Variables	Means	S.D.	1	2	3	4	5	6	7	8	9	10
1	Employee age[a]	27.68	3.91	--									
2	Employee gender[b]	.60	.49	.09	--								
3	Employee education[c]	.96	.20	-.02	-.03	--							
4	Employee tenure[a]	3.02	2.32	.41***	.17*	-.03	--						
5	Past performance	6.07	.87	-.14	.08	-.07	-.10	--					
6	Manager's attribution	3.16	1.41	-.03	-.17*	.01	-.06	-.29***	--				
7	Promotive voice	3.96	1.52	.17*	.15	.07	.19*	.24**	.10	--			
8	Prohibitive voice	3.64	1.38	.12	.08	.01	.20*	.23*	.06	.72***	--		
9	LMX	3.67	.69	-.05	-.05	.07	-.11	.17	-.02	.07	-.11	--	
10	Promotability	5.51	1.08	-.02	.05	-.07	-.11	.66***	-.36***	.19*	.21*	.17*	--

Note. $N = 147$. [a] Age and tenure were measured in years. [b] 0 = male; 1 = female. [c] 0 = high school or below; 1 = college or above.

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

Table 2
Hierarchical Multilevel Analyses for Promotability (Study 1)

	Promotability					
Variables	M1[a]	M2	M3	M4	M5	M6
Employee age	.00 (.02)	.00 (.02)	.00 (.01)	.00 (.02)	.00 (.02)	-.00 (.02)
Employee gender	-.30* (.15)	-.30* (.15)	-.29 (.15)	-.28 (.15)	-.26 (.15)	-.28 (.15)
Employee education	.19 (.36)	.10 (.36)	.10 (.36)	.10 (.36)	.19 (.36)	.14 (.35)
Employee tenure	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)
Past performance	.76*** (.11)	.71*** (.11)	.71*** (.11)	.71*** (.11)	.71*** (.11)	.68*** (.10)
Manager's attribution	-.15* (.07)	-.17 (.13)	-.17* (.07)	-.17* (.07)	-.17* (.07)	-.18** (.06)
Promotive voice (PMV)		.00 (.13)	-.00 (.13)	-.01 (.13)	.01 (.14)	.05 (.14)
Prohibitive voice (PHV)		.18 (.13)	.19 (.13)	.19 (.13)	.21 (.14)	.16 (.13)
PMV^2			.04 (.10)	.03 (.11)	.05 (.11)	.11 (.11)
PHV^2			.03 (.09)	.03 (.09)	.03 (.09)	-.08 (.09)
LMX				.01 (.08)	-.02 (.08)	-.23* (.11)
PMV x LMX					-.02 (.14)	-.10 (.14)
PHV x LMX					-.13 (.12)	.05 (.13)
PMV^2 x LMX						-.01 (.12)
PHV^2 x LMX						.32** (.10)
$\Delta\chi^2$(df)	52.34(6)***	3.88(2)	.58(2)	.03(1)	2.54(2)	9.62(2)**
Pseudo ΔR^2	.49	.05	.01	.00	.01	.15

Note. [a]M = Model.
*p < .05. **p < .01. ***p < .001.

Table 3

Tests of Simple Slopes for Quadratic-By-Linear Interactions of Prohibitive Voice and LMX for Promotability (Studies 1 and 2)

	β	*β*	*β*	*β*	*β*
	X[a] (2SD[b] low)	X (1SD low)	X (medium)	X (1SD high)	X (2SD high)
Study 1					
High LMX	-.67	-.24	.18	.53	.97*
Low LMX	1.79**	.96**	.14	-.69	-.85*
Study 2					
High LMX	.41	.42*	.43***	.44*	.44
Low LMX	.85***	.48***	.11	-.27*	-.69**

Note. [a] X indicates independent variable. [b] SD = standard deviation.

*$p < .05$. **$p < .01$.

Table 4

Means, Standard Deviations, and Correlations among the Variables (Study 2)

	Variables	Means	S. D.	1	2	3	4	5	6	7	8	9
1	Employee age[a]	29.80	3.50	--								
2	Employee gender[b]	.60	.53	.00	--							
3	Employee education[c]	.26	.44	-.02	-.02	--						
4	Employee tenure[a]	4.56	2.95	.69***	.03	-.10	--					
5	Past performance	4.92	.84	.02	-.10	.01	-.02	--				
6	Promotive voice	3.68	.69	-.06	.02	-.01	-.10	.35***	--			
7	Prohibitive voice	3.65	.83	.02	.04	-.08	-.04	.37***	.13*	--		
8	LMX	3.68	.71	.04	-.10	.07	.10	.34***	.15*	.04	--	
9	Promotability	4.93	1.31	.06	-.11	.01	.03	.51***	.24***	.32**	.31***	--

Note. $N = 289$. [a] Age and tenure were measured in years. [b] 0 = male; 1 = female. [c] 0 = bachelor's degree or below; 1 = master's degree or above. *$p < .05$. **$p < .01$. *** $p < .001$.

Table 5
Hierarchical Multilevel Analyses for Promotability (Study 2)

	Promotability					
Variables	M1[a]	M2	M3	M4	M5	M6
Employee age	.01 (.02)	.01 (.02)	.01 (.02)	.02 (.02)	.01 (.02)	.02 (.02)
Employee gender	-.13 (.11)	-.16 (.11)	-.14 (.11)	-.11 (.10)	-.12 (.10)	-.13 (.10)
Employee education	.04 (.09)	.08 (.08)	.10 (.08)	.08 (.08)	.09 (.08)	.10 (.08)
Employee tenure	-.02 (.03)	-.01 (.03)	-.01 (.03)	-.02 (.03)	-.02 (.03)	-.01 (.03)
Past performance	.93*** (.08)	.85*** (.08)	.82*** (.08)	.74*** (.08)	.75*** (.08)	.72*** (.08)
Promotive voice (PMV)		.06 (.06)	.04 (.06)	.04 (.06)	.03 (.06)	.07 (.06)
Prohibitive voice (PHV)		.25*** (.07)	.19** (.07)	.23*** (.07)	.27*** (.07)	.27*** (.07)
PMV^2			-.04 (.04)	-.04 (.04)	-.05(.04)	-.05 (.04)
PHV^2			-.17** (.05)	-.11* (.05)	-.15** (.06)	-.09* (.06)
LMX				.28*** (.07)	.23*** (.07)	.07 (.10)
PMV x LMX					-.01 (.06)	-.01 (.06)
PHV x LMX					.12* (.05)	.16** (.05)
PMV^2 x LMX						-.00 (.04)
PHV^2 x LMX						.09* (.04)
$\Delta\chi^2$ (df)	112.9(5)***	14.23(2)***	10.84(2)**	16.42(1)***	5.65(2)	5.08(2)
Pseudo ΔR^2	.26	.02	.02	.01	.03	.04

Note. [a]M = Model.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 6
Means, Standard Deviations, and Correlations among the Variables (Study 3)

	Variables	Means	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Employee age[a]	34.33	4.79	--													
2	Employee gender[b]	.48	.50	-.04	--												
3	Employee education[c]	.28	.45	.01	.00	--											
4	Employee tenure[a]	5.57	4.17	.49***	-.08	-.00	--										
5	Dyadic tenure[a]	3.56	2.12	.34***	-.10	-.06	.80***	--									
6	Proactivity	4.70	1.09	.08	-.04	.00	-.04	-.03	--								
7	Past performance	4.23	1.38	-.03	.01	.06	-.01	-.01	.05	--							
8	Negative affect	3.29	.98	-.03	-.13	-.01	.13	.04	-.04	-.12	--						
9	Managerial openness	4.02	.50	-.01	.04	-.03	-.14	-.08	-.03	.13	-.08	--					
10	Promotive voice	4.39	1.14	.06	.04	-.08	.09	.08	.24***	.09	.02	.06	--				
11	Prohibitive voice	4.24	1.27	.06	-.04	.04	.07	.03	.13	.19**	-.03	-.08	.20**	--			
12	LMX	4.53	1.36	.08	.12	-.06	-.02	-.08	-.10	.07	-.08	-.00	.01	-.00	--		
13	Voice constructiveness	4.41	1.41	-.01	.09	-.02	.00	.07	-.04	.22**	-.06	-.05	.05	.01	.33***	--	
14	Overall performance	4.50	1.43	-.04	.03	.04	-.05	-.04	-.13	.04	-.11	-.02	.06	.06	.16*	.21**	--

Note. $N = 206$. [a] Age, tenure , and dyadic tenure were measured in years. [b] 0 = male; 1 = female. [c] 0 = bachelor's degree or below; 1 = master's degree or above.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 7

Hierarchical Multilevel Analyses for Manager-Perceived Voice Constructiveness (Study 3)

	Voice Constructiveness					
Variables	M1[a]	M2	M3	M4	M5	M6
Employee age	.01 (.02)	.01 (.02)	.00 (.02)	-.01 (.02)	-.01 (.02)	-.01 (.02)
Employee gender	.24 (.20)	.22 (.19)	.223(.19)	.16 (.18)	.14 (.18)	.08 (.17)
Employee education	-.07 (.17)	-.06 (.17)	-.07 (.17)	-.02 (.16)	-.04 (.16)	-.04 (.15)
Employee tenure	-.01 (.04)	-.01 (.04)	.01 (.04)	.00 (.04)	.01 (.04)	.00 (.04)
Dyadic tenure	.06 (.08)	.05 (.08)	.03 (.08)	.06 (.07)	.06 (.07)	.07 (.07)
Past performance	.21** (.07)	.21** (.07)	.22** (.07)	.20** (.07)	.16* (.07)	.16* (.07)
Proactivity	-.07 (.10)	-.07 (.10)	-.08 (.10)	-.02 (.09)	-.02 (.09)	-.00 (.09)
Negative affect	-.02 (.10)	-.03 (.10)	-.05 (.10)	-.02 (.10)	-.04 (.10)	-.04 (.09)
Managerial openness	-.25 (.20)	-.28 (.20)	-.30 (.20)	-.29 (.19)	-.28 (.19)	-.31 (.18)
Promotive voice (PMV)		.08 (.11)	.07 (.11)	.06 (.10)	.03 (.10)	.07 (.10)
Prohibitive voice (PHV)		-.09 (.10)	-.06 (.10)	-.04 (.10)	-.03 (.10)	-.05 (.09)
PMV^2			-.05 (.08)	-.09 (.08)	-.09 (.08)	-.13 (.07)
PHV^2			-.14 (.09)	-.10 (.09)	-.09 (.09)	-.04 (.08)
LMX				.45*** (.09)	.45*** (.09)	-.01 (.14)
PMV x LMX					.08 (.10)	.17 (.10)
PHV x LMX					.17* (.08)	.11(.08)
PMV^2 x LMX						.07 (.08)
PHV^2 x LMX						.34*** (.08)
$\Delta\chi^2$(df)	12.10(9)	1.20(2)	2.88(2)	22.37*** (1)	4.91(2)	17.97***(2)
Pseudo ΔR^2	.06	.01	.02	.11	.03	.09

Note. [a]M = Model.

*p < .05. **p < .01. ***p < .001.

Table 8

Hierarchical Multilevel Analyses for Overall Performance (Study 3)

	Overall Performance						
Variables	M1[a]	M2	M3	M4	M5	M6	M7
Employee age	.00 (.02)	.00 (.02)	-.00 (.02)	-.01 (.02)	-.01 (.02)	-.01 (.02)	-.01 (.02)
Employee gender	-.03 (.19)	-.02 (.19)	-.01 (.19)	-.05 (.19)	-.06 (.19)	-.09 (.18)	-.09 (.18)
Employee education	.02 (.17)	.03 (.17)	-.02 (.17)	.00 (.17)	-.03 (.17)	-.03 (.16)	-.03 (.16)
Employee tenure	-.02 (.05)	-.03 (.05)	-.01 (.05)	-.01 (.04)	-.00 (.05)	-.00 (.04)	-.00 (.04)
Dyadic tenure	.02 (.08)	.02 (.08)	.00 (.08)	.02 (.08)	.00 (.08)	.01 (.08)	-.00 (.07)
Past performance	.07 (.07)	.04 (.07)	.05 (.07)	.04 (.07)	-.00 (.07)	-.00 (.07)	-.03 (.07)
Proactivity	-.23* (.09)	-.27** (.09)	-.27** (.09)	-.24** (.09)	-.26** (.09)	-.26** (.09)	-.27** (.09)
Negative affect	-.06 (.14)	-.08 (.13)	-.09 (.14)	-.09 (.14)	-.12 (.13)	-.11 (.13)	-.11 (.13)
Managerial openness	-.06 (.26)	-.06 (.26)	-.07 (.26)	-.07 (.27)	-.04 (.26)	-.04 (.25)	.01 (.25)
Promotive voice (PMV)		.14 (.10)	.12 (.10)	.11 (.10)	.07 (.10)	.09 (.10)	.09 (.10)
Prohibitive voice (PHV)		.12 (.11)	.15 (.11)	.15 (.11)	.15 (.10)	.14 (.10)	.14 (.10)
PMV^2			-.08 (.07)	-.10 (.07)	-.09 (.07)	-.07 (.07)	-.07 (.07)
PHV^2			-.13 (.09)	-.11 (.09)	-.09 (.09)	-.07 (.09)	-.06 (.09)
LMX				.21* (.10)	.20* (.09)	-.02 (.15)	-.02 (.15)
PMV x LMX					.21* (.10)	.24* (.10)	.22* (.10)
PHV x LMX					.15 (.09)	.13 (.09)	.10 (.09)
PMV^2 x LMX						-.02 (.07)	-.05 (.07)
PHV^2 x LMX						.20* (.09)	.15 (.09)
Mediator							
Voice constructiveness							.16* (.07)
$\Delta\chi^2$(df)	7.19(9)	4.44(2)	5.22(2)	5.02*(1)	6.20*(2)	5.44(2)	4.41*(1)
Pseudo ΔR^2	.04	.03	.01	.02	.04	.04	.03

Note. [a]M = Model. *p < .05. **p < .01. ***p < .001.

Table 9

Tests of Simple Slopes for Quadratic-By-Linear Interactions of Prohibitive Voice and LMX for Manager-Perceived Voice Constructiveness and Manager-Rated Overall Performance (Study 3)

	β	*β*	*β*	*β*	*β*
	X[a] (2SD[b] low)	X (1SD low)	X (medium)	X (1SD high)	X (2SD high)
Voice constructiveness					
High LMX	-.85	-.38	.09	.56*	1.02*
Low LMX	1.36**	.61*	-.14	-.89***	-1.63**
Overall performance					
High LMX	-.13	.06	.25	.44	.63
Low LMX	1.12*	.57*	.02	-.53*	-1.08*

Note. [a] X indicates independent variable. [b] SD = standard deviation.

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

Table 10

Conditional Indirect Effect of Prohibitive Voice on Manger-Rated Overall Performance Through Manager-Perceived Voice Constructiveness (Study 3)[a]

Moderator	Predictor	Overall Performance	
LMX	Voice	Indirect effect	95% confidence interval
High	Very low[b]	-.14	-.39, .03
High	Low	-.06	-.20, .03
High	Medium	.01	-.03, .07
High	High	.09	-.00, .23
High	Very high	.16	-.00, .42
Low	Very low	.22*	.02, .49
Low	Low	.10*	.01, .24
Low	Medium	-.02	-.07, .02
Low	High	-.14*	-.31, -.02
Low	Very high	-.26*	-.56, -.03

Note. [a]Based on 20,000 Monte Carlo samples (Selig & Preacher, 2008). [b]Very high = 2 SD above the mean, High = 1 SD above the mean, Medium = Mean value, Low = 1 SD below the mean, Very low = 2 SD below the mean.
*$p < .05$.

Table 11

Summary of the Results of Hypothesis Testing

Hypotheses	Study 1 (Chinese sample)	Study 2 (U.S. sample)	Study 3 (U.S. sample)
	Results	Results	Results
H1a (curvilinear effect of promotive voice)	NS[a]	NS	NS
H1b (curvilinear effect of prohibitive voice)	NS	S	NS
H1c (comparative effects of two types of voice)	NS	S	NS
H2a (curvilinear interactive effect of promotive voice and LMX on managers' evaluations)	NS	NS	NS
H2b (curvilinear interactive effect of LMX and prohibitive voice and LMX on managers' evaluations)	S	S	S
H2c (comparative moderating effects of LMX on two types of voice for managers' evaluations)	S	S	S
H3a (curvilinear interactive effect of promotive voice and LMX on voice constructiveness)			NS
H3b (curvilinear interactive effect of prohibitive voice and LMX on voice constructiveness)			S
H3c (comparative moderating effects of LMX on two types of voice for voice constructiveness)			S
H4a (mediating role of voice constructiveness for promotive voice x LMX)			NS
H4b (mediating role of voice constructiveness for prohibitive voice x LMX)			S
H4c (comparative mediating role of voice constructiveness for both types of voice in high vs low LMX dyads))			S

Note. [a] S means supported and NS means not supported in the column "Results."

Figure 1.

Proposed theoretical model

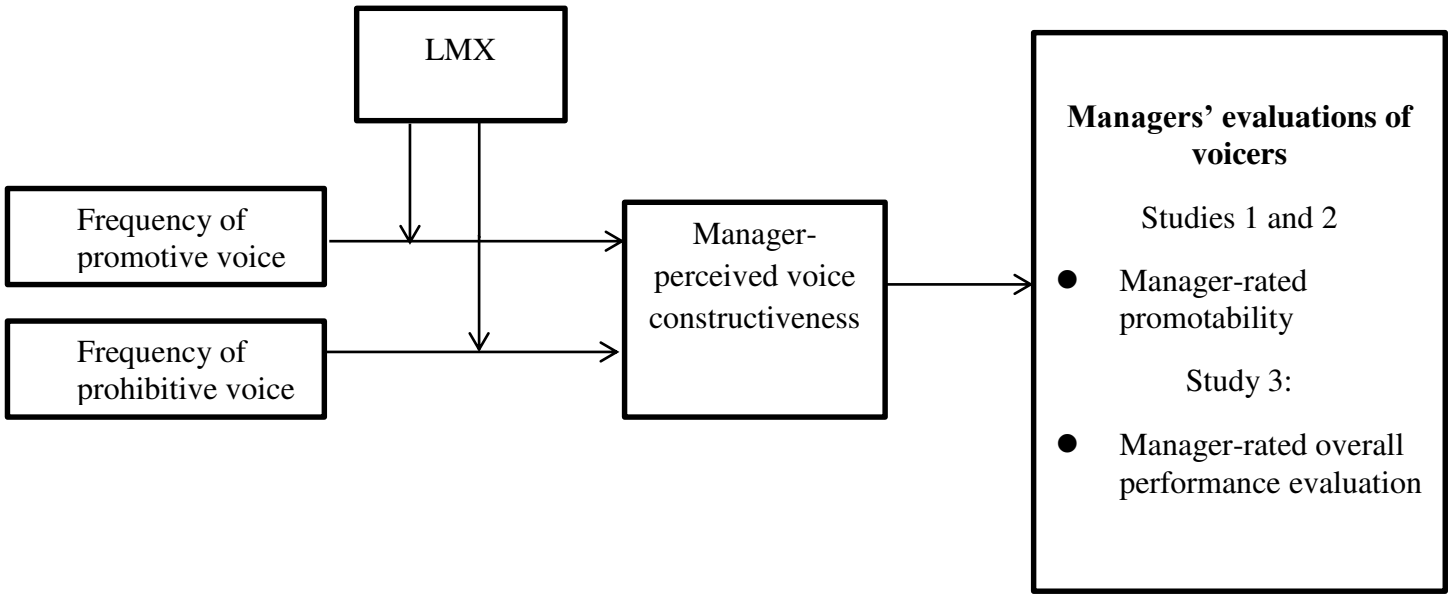
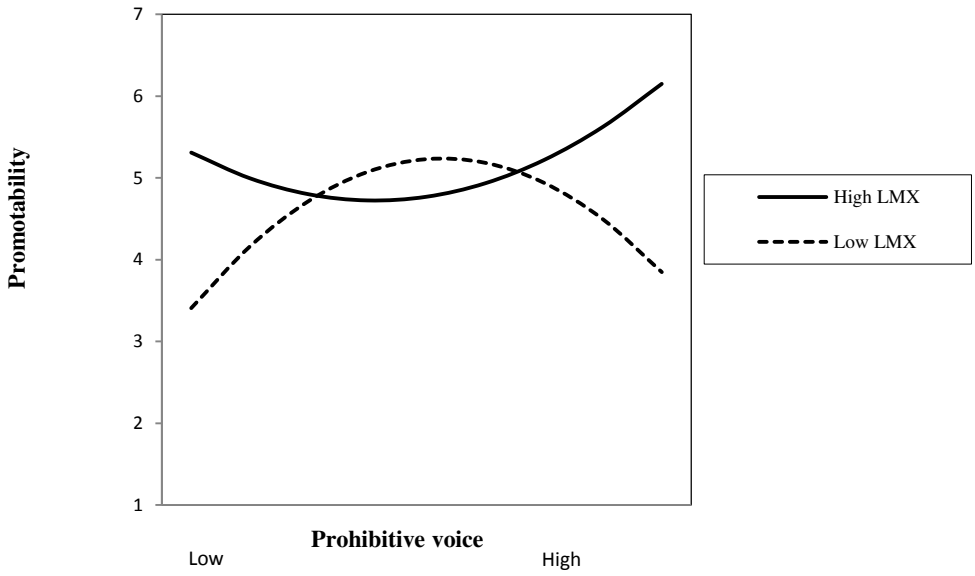


Figure 2. Results of the quadratic-by-linear interactive effect of prohibitive voice and LMX on promotability (Studies 1 and 2)

A: Study 1



B: Study 2

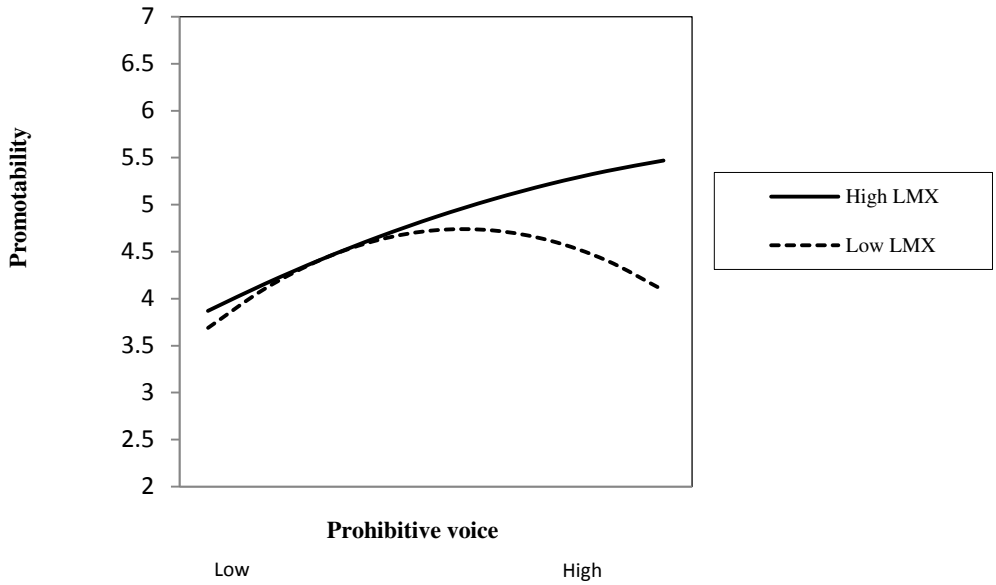
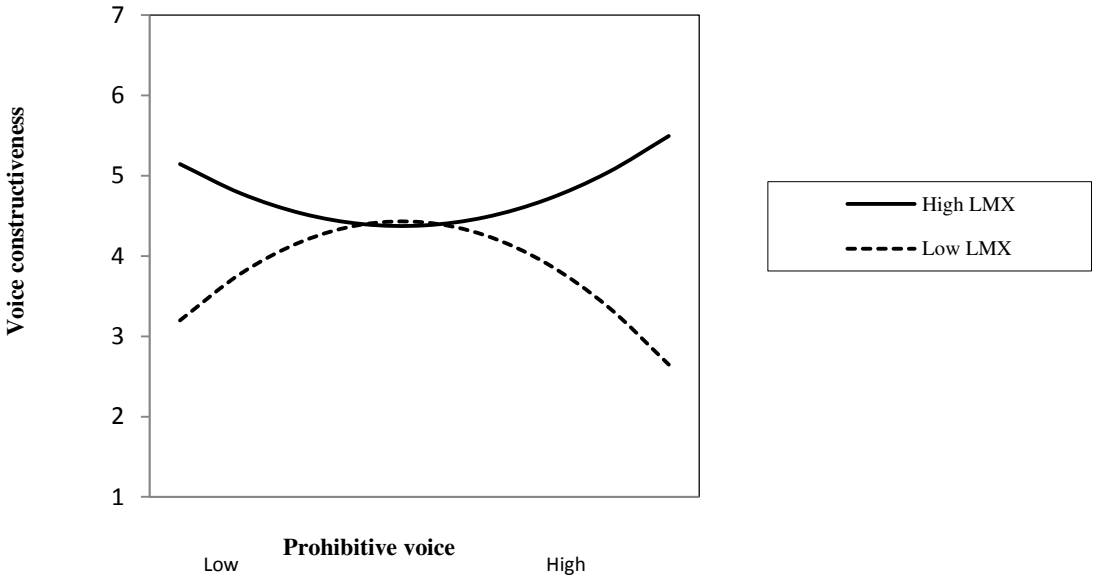


Figure 3. Results of the quadratic-by-linear interactive effect of prohibitive voice and LMX on voice constructiveness and overall performance (Study 3)

A:



B: