

RESEARCH ARTICLE

The relationship between ethical leadership and employee voice: The roles of error management climate and organizational commitment

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Abstract

Studies have shown that voice could be utilized as an effective method to improve organizational effectiveness. This study explores the relationship between ethical leadership and employee voice behavior by focusing on the mediating role of the error management climate and the moderating role of the employee's organizational commitment. Analysis of data collected in three phases in China indicates that the error management climate partly mediates the relationship between ethical leadership and voice behavior. Also, organizational commitment is found to moderate the relationship between the error management climate and voice behavior. Theoretical and practical implications of these results are discussed.

Keywords: Ethical leadership; voice; error management climate; organizational commitment

In response to today's highly dynamic business environment such as global competition, rapid rates of innovation, and organizational downsizing, one way leaders can help their organizations to innovate continuously (Argyris & Schön, 1987) and successfully respond to change (Detert & Burris, 2007) is to cultivate the voice (expression of ideas) of their employees (Frazier & Bowler, 2015). An increasing amount of research has supported the significant impact of ethical leadership (Brown, Trevino, & Harrison, 2005) on follower voice (Brown, Trevino, and Harrison, 2005; Chen and Hou, 2016; Lee, Choi, Youn, and Chun, 2017; Zhu, He, Treviño, Chao, and Wang, 2015). How does ethical leadership impact the follower's voice? We still know little about this process. Some studies suggested that more attention should be paid to exploring the mediating mechanisms that underlie this relationship (Duan, Li, Xu, and Wu, 2017; Lee et al., 2017; Zhu et al., 2015). To answer the question and respond to the concern of the previous literature, we launched this research. We aim to put forward a comprehensive model that introduces the error management climate (EMC) as a new mediator and the employee's commitment to the organization as a moderator to explain how ethical leadership works to encourage employee voice behavior.

Prior studies have indicated that employee voice is associated with positive organizational outcomes and actions, such as team learning (Edmondson, 1999), the improvement of work processes and innovation (Argyris & Schön, 1987), and crisis prevention (Schwartz & Wald, 2003). Furthermore, when employees feel their voices can be heard, the level of their perception of organizational justice and job satisfaction will increase significantly (Taylor, Tracy, & Renard, 1995; Avery & Quiñones, 2002), and intragroup conflict and turnover intention will decrease accordingly (de Vries, Jehn, & Terwel, 2012; Lam, Loi, Chan, & Liu, 2016). Conversely, Perlow and Williams (2003) showed that the lack of employee voice opportunities in organizations

'can exact a high psychological price on individuals, generating feelings of humiliation, pernicious anger, resentment, and the like that, if unexpressed, contaminate every interaction, shut down creativity, and undermine productivity' (p. 52).

However, in reality, most employees hesitate to voice their opinions regarding how to improve their workplace practices (Detert & Trevino, 2010). Even though serious issues (e.g., sexual harassment, product defects, and safety violations) regularly occur, many workers still choose to remain silent (Guenter, Schreurs, van Emmerik, & Sun, 2017). What factors influence an employee's decision on whether or not to voice their concerns? Unlike other forms of organizational citizenship behavior (OCB), the voice is unique, because it is inherently challenging. Voicing concerns may bring direct or indirect costs to the person using that voice. Therefore, this is often preceded by the deliberate and careful contemplation of the consequences of doing so (Morrison & Phelps, 1999). Employees will choose to express their opinions, concerns, suggestions, etc., only when they believe the perceived benefits will outweigh the potential costs (Dutton, Ashford, O'Neill, Hayes, & Wierba, 1997; Kish-Gephart, Detert, Treviño, & Edmondson, 2009; Milliken, Morrison, & Hewlin, 2003). For these reasons, voice is enhanced in a climate in which employees ensure that their voice behaviors are viable, legitimate, safe, and could even be effective (Hsiung & Tsai, 2017; Morrison, Wheeler-Smith, & Kamdar, 2011).

Ethical leaders, as part of being open, just and fair, show interest in listening to and caring about employees' opinions on the operation and direction of the organization (Shin, Sung, Choi, & Kim, 2015), support employees speaking up by highlighting the importance of mutual communication in a work setting (Chen & Hou, 2016; Javed, Rawwas, Khandai, Shahid, & Tayyeb, 2018), and make employees feel safer speaking up by fostering an ethical climate (Bai, Lin, & Liu, 2017; Hansen, Dunford, Alge, & Jackson, 2016; DeConinck, 2015). Therefore, ethical leaders, as critical determinants of encouraging employees to speak up (e.g., voicing and whistleblowing) (Cheng, Bai, & Yang, 2019; Zhu et al., 2015), have received wide attention. Related research has provided academic evidence that ethical leadership can influence employee voice behavior (Chen & Hou, 2016; Lee et al., 2017; Walumbwa & Schaubroeck, 2009; Walumbwa, Morrison, & Christensen, 2012).

The ethical leadership construct was initially proposed to rely on social learning processes to produce its effects (Brown, Trevino, & Harrison, 2005). However, the mediating mechanisms that explain the relationships between ethical leadership and employee voice behavior are confined by scholars to psychological paths. These psychological mediators include organizational and relational identifications (Zhu et al., 2015), work engagement (Cheng, Chang, Kuo, & Cheung, 2014), and promotion focus (Neubert, Wu, & Roberts, 2013). Furthermore, little research from the perspective of social learning has been conducted to empirically examine mechanisms that underlie the relationship between ethical leadership and employee voice (Bai, Lin, & Liu, 2017). Recently, researchers have emphasized the influence of the particular organizational climate established and cultivated by ethical leaders (i.e., an ethical climate) on organizational outcomes (e.g. corporate social responsibility), group outcomes (e.g. group learning behavior), individual outcomes (e.g., employee turnover intention) (Demirtas & Akdogan, 2015; Walumbwa, Hartnell, & Misati, 2017; Wu, Kwan, Yim, Chiu, & He, 2015), and employee voice (Bai, Lin, & Liu, 2017). To enrich the understanding of this mechanism, therefore, we introduce the construct of the EMC which is an aspect of the organizational climate established or fostered by ethical leaders. This construct is proposed as a new mediating variable to explain how ethical leadership can positively influence employee voice.

The EMC, as a kind of organizational climate, refers to an employee's perceptions of 'organizational practices related to communicating about errors, sharing error knowledge, helping in error situations, and quickly detecting and handling errors' (van Dyck, Frese, Baer, & Sonnentag, 2005, p. 1,229). A high EMC means an environment with open communication about errors (van Dyck et al., 2005) and a focus on perceptions of safety (Erdogan, Ozyilmaz, Bauer, & Emre, 2018) so that errors can be tolerated, providing adequate actions are taken to deal with those errors. Learning from errors is encouraged. EMC is the opposite of an error

aversion climate (i.e., a blamed-oriented climate) (Gold, Gronewold, & Salterio, 2013) in which errors are not tolerated and those committing errors are punished, and ‘people are inherently hesitant to talk about their errors because they know this likely leads to negative attributions and they will be blamed’ (van Dyck et al., 2005, p. 1,230).

Ethical leadership, on the one hand, can be posited as one antecedent of EMC. Since ethical leaders are thought to be trustworthy, responsible, and sustainability-oriented, they are far more inclined to tolerate errors and to take effective actions to deal with errors (Eisenbeiss, 2012). Therefore, ethical leaders facilitate the forming of an EMC. On the other hand, the inherent challenge of voice means that one of the voicer’s biggest concerns is the safety of the outcome (Hsiung & Tsai, 2017; Wu et al., 2015). In a high EMC, ideas, comments, suggestions, and questions are welcomed. In these situations, voicing acts to prompt organizational learning or advancement, which is favorable for the voicer and employees will be more willing to express their voice. In line with the above discussions, EMC could be regarded as one effective mediator of the relationship between ethical leadership and voicing.

According to Bandura’s three-way reciprocal determinism (Bandura, 1989), action, personal factors (including cognitive, affective, and other factors), and environmental events all combine as interacting determinants. Therefore, the degree of influence of EMC on voice will change if individuals have different attitudes towards their organizations. Organizational commitment refers to the level of an individual’s identification with and involvement in his or her organization (Mowday, Porter, & Steers, 1982). If the employee has a higher level of commitment, he/she would be more likely to contribute to the organizational goals (Zhu et al., 2015). Employees with a higher level of organizational commitment are more likely to express their concerns about the organization to an appropriate manager even if the climate they perceived is one where errors are not tolerated. On the contrary, employees with a lower level of organizational commitment, have no intention of aiding organizational success by voicing their concerns (Zhu et al., 2015), they may even feel errors are acceptable. Hence, we choose organizational commitment as a moderator which regulates the relationship between EMC and voicing, to provide a more sophisticated description of how EMC influences voice behavior.

In summary, the particular purpose of this study is to enrich the explanation of the influences of ethical leadership on employee voice behavior. This study makes two contributions. First of all, our research introduces a new mediator — EMC which can link ethical leadership with voice. Secondly, our study incorporates organizational commitment as a moderator of EMC and employee voice behavior. The research hypotheses developed in this study were empirically tested using three-phase data in a Chinese context.

Conceptual background and hypotheses

Employee voice

Voice is often defined as making a constructive, change-oriented communication, intended to improve one’s situation (Ang, Van Dyne, & Begley, 2003; Lepine & Van Dyne, 2001). Given the fact that voice behavior can play a prominent role in the success of an organization, the concept of voice has attracted considerable attention from scholars for some time now. Much of the organizational research on voice behavior originated from the Exit, Voice, Loyalty, and Neglect (EVLN) framework (Farrell, 1983; Hirschman, 1970). These scholars regarded voice as a response to personal dissatisfaction at work or to organizational problems. More recently, scholars have thought of voice as a proactive extra-role behavior, motivated by a desire to improve organizational effectiveness as opposed to the earlier motive of removing personal dissatisfaction, as stated in EVLN research (Morrison, 2011). Besides these two streams of thought, voicing was also found to be an issue-solving behavior, with the motivation of protecting or acquiring the resources required to satisfy the voicer’s needs (Ng & Feldman, 2009).

However, no matter what the motive, rational employees will only choose to voice when they feel the potential benefits of voicing outweigh the possible costs. Perceived potential benefits of giving voice to concerns include organizational benefits (e.g., improving organizational effectiveness and getting problems solved) and personal benefits (e.g., earning a good reputation, receiving positive performance evaluations, or receiving rewards in the forms of money or promotion) (Dutton et al., 1997). On the other hand, the perceived costs or risks include being viewed as a picky person, being misunderstood as a person who undermines the credibility of important stakeholders, experiencing emotional alienation from coworkers or supervisors, and even receiving negative performance evaluations (Fast, Burris, & Bartel, 2014; Oc, Bashshur, & Moore, 2015).

Undoubtedly, leaders are one of the most critical factors influencing this benefit-cost calculation process. On the one hand, leaders may be the target of the voicing. If leaders think voicing is offensive, this concept and practice will not be adopted, and the aims of voicing will fail. On the other hand, leaders have the power to influence an employee's desired outcomes, such as job assignments, pay raises, and promotions. If leaders give a negative appraisal to the voicer, the costs to the employees will increase considerably.

Therefore, it is no surprise that there is a growing body of research exploring the effects of leadership on employee voice. Prior studies have found that leadership, including ethical leadership, can be used to forecast employee voice behavior (Chen & Hou, 2016; ; Duan et al., 2017; Guenter et al., 2017; Li & Sun, 2015; Liu, Zhu, & Yang, 2010; Walumbwa & Schaubroeck, 2009; Walumbwa, Morrison, & Christensen, 2012). However, we still know little about the means through which ethical leadership works on voice behavior. Our research looks for a new mechanism which can be used to explain the relationship between ethical leadership and employee voice behavior.

Ethical leadership and employee voice

Ethical leadership is defined as 'the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making' (Brown, Trevino, & Harrison, 2005). An increasing body of literature has lent further support to the argument that ethical leaders play an important role in facilitating follower outcomes. These outcomes not only include the follower's job performance (Piccolo, Greenbaum, & Hartog, 2010; Walumbwa, Mayer, & Wang, 2011; Walumbwa, Morrison, & Christensen, 2012), but also OCB (or extra-role behavior) (Kacmar, Bachrach, Harris, & Zivnuska, 2011; Ko, Ma, Kang, English, & Haney, 2017; Mayer, Aquino, Greenbaum, & Kuenzi, 2012; Schaubroeck et al., 2012; DeConinck, 2015).

Three perspectives can be used to explain the influence of ethical leadership, namely a social learning perspective, a social exchange perspective, and a transcendental perspective. From the social learning perspective, ethical leaders are role models and will be imitated by their employees (Javed et al., 2018). Ethical leaders are altruistically motivated and responsible, and they are likely to speak out against inappropriate behavior (Brown, Trevino, & Harrison, 2005). As such, employees will model their own voice behavior after that of their ethical leaders.

From the social exchange perspective, ethical leaders are caring, fair and concerned about their followers and others in society (Chen & Hou, 2016; Treviño, Brown, & Hartman, 2003). These characteristics allow ethical leaders to earn the trust and loyalty of their followers. To reward leaders, employees will be more committed to the organization (Kanungo & Conger, 1993) and more willing to contribute to the success of that organization. As such, voicing their concerns will be one of the constructive choices of behavior available to them. Recent studies have also shown that ethical leadership can enhance followers' voice behavior as rated by their immediate supervisors and group-level voicing (Huang & Paterson, 2017; Lee et al., 2017; Walumbwa & Schaubroeck, 2009; Walumbwa, Morrison, & Christensen, 2012).

From the transcendental perspective, ethical leaders show some transcendental characteristics and spiritual aspects, because they adhere to ethical beliefs and try to actualize the spirit of the

human community; they try to pursue transcendental motivation, that is, doing the right thing regardless of the possible costs and losses; they demonstrate moral characteristics, just as valuing justice, prudence, fortitude, love, faith, and hope (Sanders, Hopkins, & Geroy, 2003). Hence, ethical leadership will inspire the employee to call on the survival of the spirit (i.e., looking for the meaning of life) and encourage the employee's transcendental motivation, which transcends self-interest, to do things for others (Cardona, 2000; Liu, 2007). One of the most important reasons why employees are afraid to voice is their concern about the costs and losses their voicing may incur. However, spiritually motivated employees will do the right thing, no matter what price they should pay. Therefore, employees with transcendental motivation are more likely to voice. Besides, ethical leaders are concerned with the well-being of their employees and would like to sacrifice themselves to serve their employees, even at the expense of their interests. Their altruistic attitude towards the employees will activate in employees the sense of membership of an employee community (Fry, 2003; Liu, 2007) and cultivate unity and cooperative behaviors within the employees (Cardona, 2000). These employees will do what should be done for the good of the organization; even though they will encounter unsatisfactory personal outcomes. Therefore, when the employees come across the shortcomings of the organization or find some areas for potential improvement of the organization, they would like to voice their ideas honestly.

According to the above discussions, we can forecast:

Hypothesis 1: Ethical leadership will be positively related to employee voice.

Error management climate as a mediator

The error is defined as an unintended deviation from plans, goals, or adequate feedback processing, as well as incorrect action resulting from a lack of knowledge (Frese & Keith, 2015; van Dyck et al., 2005; Zapf, Brodbeck, Frese, Peters, & Prümper, 1992). Errors exist widely in most organizations (Frese & Keith, 2015). Two theoretical perspectives have been identified in the literature relating to error as a phenomenon: prevention and resilience. From the prevention perspective, errors are regarded as negative phenomena which are detrimental to the benefits of the organization. As such, errors should be precluded or eradicated. From the resilience perspective, errors are never completely avoidable because of the limitations and imperfections in human abilities and organizational systems (Heron & Reason, 1997; van Dyck et al., 2005). Therefore, organizations should take the necessary measures to resolve these problems and errors before serious consequences occur. Errors have even been thought of and used as excellent opportunities for organizational learning and innovation (Frese, Brodbeck, Heinbokel, Mooser, Schleiffenbaum, & Thiemann, 1991).

The concept of the EMC originated from the resilience stream of research. An EMC as an organizational climate refers to an environment in which employees have the perception that communicating and sharing errors is encouraged, they help each other with the errors, errors are explored and analyzed, errors' negative influence is reduced, and the staff recovers quickly from these mistakes (Cigularov, Chen, & Rosecrance, 2010; van Dyck et al., 2005). In recent studies, an EMC has been regarded as most closely related to organizational learning, innovation (Frese & Keith, 2015; van Dyck et al., 2005), and organizational performance (Keith & Frese, 2011; van Dyck et al., 2005). Also, the EMC has been proved to be directly related to such consequences as safety behaviors and the reduction in work-related pain of construction workers (Cigularov, Chen, & Rosecrance, 2010) and employees' helpful behavior in restaurants (Guchait, Paşamehmetoğlu, & Lanza-Abbott, 2015).

Ethical leadership and EMC

Following from previous research in this area, we believe ethical leadership will play a positive role in forming an EMC. Our assumption is based on the following reasons: first, emerging research

suggests that ethical leaders are characterized as trustworthy, caring, and principled individuals who make fair and balanced decisions (Eisenbeiss, 2012). According to this argument, ethical leaders understand that errors can never be completely prevented. As such, attributing the errors to an employee's undesirable personality traits, lack of knowledge and skills, or low intelligence is not considered to be fair by ethical leaders. Therefore, such leaders will tolerate errors in their organization instead of blaming or punishing the employees. On the contrary, these leaders prefer to communicate with their employees, encourage analyzing the causes of errors and try to control the damage.

Secondly, ethical leaders are known to consider the sustainable development of the organization as a top priority (Eisenbeiss, 2012). Since opportunities for change always accompany errors, ethical leaders will consider errors to be learning opportunities. Even more, these leaders will encourage employees to explore and experiment through trial and error. Many studies have reported that honest leaders do not avoid uncertainty by imposing stringent controls but rather they boost employees' creativity by allowing their subordinates to take risks (Gu, Tang, & Jiang, 2015; Javed et al., 2018).

Thirdly, ethical leaders are supposed to have a strong inner sense of obligation to do the right thing, and they always 'walk the talk' (Brown, Trevino, & Harrison, 2005; Javed et al., 2018). If ethical leaders have done something wrong, they will learn from their errors, and will not hesitate to correct themselves, rather than hiding their mistake. Such a role model will enhance the organizational EMC.

When exposed to the influence of the above three aspects, employees will be far more likely to regard errors as learning opportunities rather than performance failures. Employees would be far more willing to report and communicate about errors with their leaders or colleagues. Also, employees will be eager to find ways to deal with and reduce the negative consequences of errors. Besides, because employees always draw a conclusion from their own experience and they will transfer their perception of the department to the perception of the organization, a 'spillover' of feelings about the department to the organization occurs. Through effective leadership practices, therefore, the EMC will be formed and strengthened. We, therefore, predict:

Hypothesis 2: Ethical leadership is positively related to a high EMC.

EMC and voice

The EMC could be predicted to prompt voice behavior. As discussed above, employees will consider the potential benefits and costs when making their decision regarding whether or not to engage in voicing behavior (Morrison & Phelps, 1999). We argue that a higher EMC will increase staff's perceived benefits of voicing and/or reduce their perceived costs.

First, in an EMC perceived as high, the organization itself will be regarded as learning and innovation oriented. Employees will think the organization as a whole will pay much closer attention to every opportunity to improve itself. Hence voicing will be treated seriously and responded to positively. Thus, employees' perceived efficacy of giving voice to concerns will increase accordingly.

Secondly, in an environment with a high EMC, characterized by a willingness to report and discuss errors (Cannon & Edmondson, 2001), employees believe voicing is welcome, and voicers are thought of as helpers of the organization, rather than troublemakers. Based on such a positive feeling, the staff's perception of potential benefits (including to the voicer's reputation, pay rewards or promotion) will inevitably grow.

Thirdly, potential voicers will assess the likely benefits and costs of voicing from multiple reference points, including the self, the workgroup or organization, and potential victims (Zhao & Olivera, 2006). In an environment with a high EMC, employees are encouraged to talk about

others' errors and their own errors, and they are able to benefit from those errors. In contrast, with a low EMC, errors will be attributed to the employee themselves. Talking about others' errors will induce others' hostility, and reporting one's own errors will be punished (Gold, Gronewold, & Salterio, 2013; van Dyck et al., 2005). Similarly, employees' voicing will be viewed by their supervisors as making errors with the result that they may be blamed or punished. Therefore, potential voicers will worry less about damage to the related stakeholders' interests. Consequently, for potential voicers, their perceived conflict in work relationships or their fear of retaliation could also decrease.

Additionally, prior research has indicated that individuals in organizations with democratic or highly ethical climates are more likely to report peer wrongdoings to higher levels of management (Kaptein, 2011). Also, an EMC has been found to be an environment in which management accountants will increase the likelihood of reporting unethical acts within their organization to more senior management (Seifert, Sweeney, Joireman, & Thornton, 2010). A high EMC can also facilitate the reporting of errors in audit firms (Gold, Gronewold, & Salterio, 2013). Therefore, we put forward the following hypothesis:

Hypothesis 3: A high EMC is positively associated with employee voice.

While research addressing voice has demonstrated some psychological mediators, for example, psychological safety (Detert & Burris, 2007), organizational identity (Liu, Zhu, & Yang, 2010), and positive mood (Hsiung, 2012) to explain the relationship between leadership and voice behavior, no climate-related variables have been proposed as the mediators to understand the underlying process of leadership influencing voice. Based on the reasons given above, we make the novel suggestion that the EMC may be an important mediator through which ethical leadership can foster employee voice behavior. Therefore:

Hypothesis 4: The EMC mediates the relationship between ethical leadership and employee voice behavior.

The moderating role of organizational commitment

Based on the above arguments, we suppose that an EMC has a positive influence on employee voice behavior. However, different individuals with different attitudes respond to organizational climates very differently (Bandura, 1989). To explore the influence of EMC on voice more precisely, this study brings in a moderator: organizational commitment, which represents a kind of personal psychological state of mind towards one's job and organization (May, Gilson, & Harter, 2004; Saks, 2006), to help explain employees' reactions to an EMC.

Organizational commitment is defined as the level of an employee's identification with and involvement in their organization (Mowday, Porter, and Steers, 1982). Organizational commitment consists of affective, normative, and continuance commitment (Meyer & Allen, 1991). Affective commitment means the employee wants to belong to the organization; normative commitment refers to how employees feel obligated to belong to the organization and continuance commitment relates to how employees feel they need to belong to the organization (Meyer & Allen, 1991). Employees with a high level of organizational commitment can be characterized as having 'a strong belief in and acceptance of the organization's goals and values, willingness to exert considerable effort on behalf of the organization and a strong desire to maintain membership of the organization' (Mowday, Porter, & Steers, 1982, p. 27). Organizational commitment has been proven to hold significant implications regarding employee behavior, for example OCB and voice (Kehoe & Wright, 2013; Morrison & Milliken, 2000).

Employees who experience strong organizational commitment have a high intrinsic motivation to improve the organization. When they have suggestions or concerns about the

organization, their attention is devoted to improving the organization, paying less attention to the context or the environment they are facing. In this case, the influence of an EMC on employee voice should be weakened.

On the contrary, for employees who have a relatively low degree of organizational commitment, when they have concerns about the organization, they will care more about the possible benefits or costs to themselves than about the potential benefits or costs to the organization. In this situation, the perceived organizational climate will play a larger role in employee behaviors. For example, if an employee with little organizational commitment doubts one of the leader's decisions and he/she perceives that the power distance within the organization is high, the employee may think voicing is risky and will not speak up. Therefore, employees with little commitment will be more likely to do what the organization prefers rather than what they think they should do. Hence, under the condition of low organizational commitment, an EMC will have a greater role in promoting the employees' voice. Therefore, we put forward the following hypothesis:

Hypothesis 5: Organizational commitment will moderate the relationship between an EMC and voice behavior; the positive relationship will be strengthened under conditions of low organizational commitment.

Integrating the logic connected with Hypotheses 4 and 5 can develop a moderated-mediation framework in which EMC is posited to mediate the relationships between ethical leadership and voice and organizational commitment moderates the EMC – voice behavior link. EMC explains the relationships between ethical leadership and voice behavior (Hypothesis 4), but because the relationship between EMC and voice behavior is predicted to be stronger when organizational commitment is lower (Hypothesis 5), we predict that the mediated relationships captured by Hypothesis 4 are weaker when organizational commitment is higher. Stated formally:

Hypothesis 6: Organizational commitment will moderate the mediating effect of EMC on the relationship between ethical leadership and employee voice, such that the indirect effect of ethical leadership on voice via EMC will be stronger under conditions of low organizational commitment.

Figure 1 depicts the hypothesized theoretical framework in this research.

Method

Sample and procedure

We collected data from the largest retailing group (including 15 companies) located in Chongqing in mainland China from November 2015 to March 2016. As the retail industry plays a critical role in ordinary people's lives, it is vital for retailers to collect voiced concerns from their employees regarding customer feedback, product quality control and so on. Some previous studies of voice have utilized samples from a single industry (e.g., Walumbwa and Schaubroeck (2009) research into a large financial institution), because such a focus has the important advantage that 'the unknown sources of variance due to organization type could be controlled' (Near, Rehg, Van Scotter, & Miceli, 2004, p. 224). We followed the same logic in selecting the retail industry as our research sample.

We delivered and collected surveys from worksites at three separate time points. During the first stage (T1), employees gauged their supervisors' ethical leadership behavior and reported their demographic information. After 1 month, the second wave (T2) of data collection was conducted. Employees assessed the level of EMC in their department and their organizational commitment. In Phase 3 (T3), which took place 1 month after Phase 2, employees rated their voice behavior.

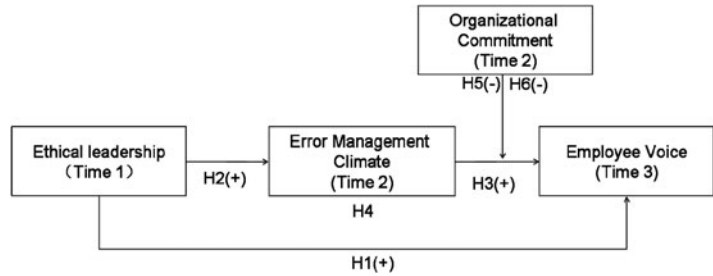


Figure 1. Theoretical model.

For each phase, the same number of questionnaires (510) was sent to employees of 15 companies. By the start of T2 and T3, the employees were expected to have responded to the previous phase's questionnaire. To avoid potential pitfalls and to motivate employees to respond, we placed a small, attractive gift of about two US dollars (e.g., a little pocket knife, a pen or a paring knife with our school logo) in each questionnaire. Each questionnaire was to be returned in a blank envelope so that all respondents could remain anonymous. To match questionnaires across the three stages to respondents, each respondent was required to create a code number to identify their questionnaire. The respondents were reminded to use the same code number on all three questionnaires. These code numbers were then matched to the survey questionnaires across Phases 1, 2, and 3.

In total, we identified 234 matched questionnaires. The proportion of female employees in our sample was 59.8%. Approximately 60% of the participants were over the age of 30. 33% of respondents were first-line managers, and 8% of respondents were middle managers. Also, 35% of the sample had spent over 8 years in their organization, and 71.2% had college degrees.

Measures

All the multi-item measures in this study were initially constructed in English. We developed Chinese versions for all of the measures, following the commonly used translation – back translation procedure (Brislin, 1980).

Ethical leadership

Brown, Trevino, and Harrison, (2005) developed and validated the 10-statement ethical leadership scale which was used in this study. An example statement was: 'My supervisor listens to what employees have to say.' Each statement was scored on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's α for this scale was .93.

Error management climate

The EMC was measured using a 17-statement version of error management culture assessment, as developed by van Dyck et al., (2005). An example statement was: 'After an error, people think through how to correct it.' Items were rated on a scale that ranged from 1 (does not apply at all) to 5 (applies completely). The Cronbach's α for this scale was .95.

Organizational commitment

We adapted Meyer and colleague's organizational commitment scale Meyer, Allen, and Smith (1993) to assess individuals' organizational commitment. We conducted a pilot study to test the validity of the organizational commitment measure when applying it to employees' perceptions in the Chinese setting. We shortened the scale by removing eight reversed items that were less appropriate in a Chinese context. The scale retained the same 18 items as the original measure. An example statement was: 'I would be very happy to spend the rest of my career with this

organization'. Items were scored on a 5-point scale which again ranged from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's α for this scale was .96.

Voice

Voice was assessed using a 10-statement voice scale, as developed by Liang, Farh, and Farh (2012). These statements are verbal expressions which measure the two sub-dimensions of voice, namely promotive voice (e.g., 'I proactively develop and make suggestions relating to issues that may influence the unit') and prohibitive voice (e.g., 'I advise other colleagues against conducting undesirable behavior that will hamper job performance'). All statements were scored on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The degrees of reliability for the promotive voice and prohibitive voice were .94 and .86, respectively, while the value of the Cronbach's α for the aggregated scale was .94.

Control variables

Due to the potential effects of individual demographics, we set controls for age, gender, education, position, and tenure. Gender was coded as 1 (representing males) and 2 (representing females). Controls were also set for department size.

Results

Confirmatory factor analyses

Confirmatory factor analyses were conducted using AMOS 16.0 to evaluate the validity of the key variables. We first examined a four-factor model, in which ethical leadership, EMC, voice and organizational commitment were included. As suggested by Hair, Anderson, Tatham, and Black (1998), the overall model's Chi-square, the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA) were used to assess the model fit. A cutoff value of close to or $>.90$ for CFI and TLI and a cutoff value of below $.08$ for RMSEA indicate a relatively acceptable fit between the proposed model and the observed data (Hair, Anderson, Tatham, & Black, 1998). The hypothesized four-factor model also fits the data very well: $\chi^2(1,371) = 2,856.91, p < .01$; TLI = .91, CFI = .91; RMSEA = .06. Also, all factor loadings were significant, which provides evidence of convergent validity.

The discriminant validity of the four constructs was tested by contrasting the four-factor model with one-factor and two-factor models. The one-factor model was obtained by loading all measured items into a 'grand' latent factor. The one-factor model yielded a poor fit with the data: $\chi^2(1,377) = 7,267.32, p < .01$; TLI = .39, CFI = .42; RMSEA = .135. Three three-factor models were obtained by separately (1) combining EMC and organizational commitment into one factor, (2) combining EMC and ethical leadership into one factor, and (3) combining organizational commitment and ethical leadership into one factor. These three-factor models yielded poor fits with the data. The three-factor EMC and organizational commitment model yielded: $\chi^2(1,374) = 4,433.45, p < .01$; TLI = .68, CFI = .69; RMSEA = .098. The three-factor EMC and ethical leadership model yielded: $\chi^2(1,374) = 3,957.74, p < .01$; TLI = .73, CFI = .74; RMSEA = .090. Finally, the three-factor organizational and ethical leadership model yielded: $\chi^2(1,374) = 4,457.00, p < .01$; TLI = .68, CFI = .69; RMSEA = .098. Thus, the discriminant validity of the four constructs was confirmed.

Descriptive statistics

Table 1 presents the means, standards deviations, and correlations among the study variables, as well as the data sources and collection schedule. The reliability of each of our variables is $>.85$, and their correlations are as expected. The results reported in Table 2 reveal that ethical leadership

Table 1. Means, standard deviations, and correlations (sample size = 234)

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 Gender	1.60	0.49	1									
2 Age	2.72	0.88	-.121	1								
3 Education	2.77	0.55	.047	-.219**	1							
4 Position	1.50	0.64	-.250**	.390**	.072	1						
5 Tenure	2.91	0.97	-.105	.542**	-.215**	.306**	1					
6 Department size	3.79	1.31	-.058	-.164*	.148*	-.054	-.136*	1				
7 Ethical leadership	3.96	0.77	-.129*	-.076	.205**	.118	-.167*	.013	1			
8 EMC	3.91	0.66	-.006	-.054	.079	-.075	-.076	.080	.519**	1		
9 OC	3.70	0.77	-.138*	.064	.091	.129*	-.067	.109	.456**	.341**	1	
10 Voice	3.89	0.63	-.116	.196**	.108	.152*	.104	-.024	.291**	.258**	.365**	1

Gender: 1 = 'male' 2 = 'female'; Education: 1 = 'high school and below high school' 2 = 'college' 3 = 'bachelor degree' 4 = 'master degree and above master'.

Position: 1 = 'general staff' 2 = 'first-line manager' 3 = 'middle manager' 4 = 'top manager'.

EMC, error management climate, OC, organizational commitment.

$N = 234$; ** $p < .01$; * $p < .05$ (Two-tailed test).

Table 2. Results of hierarchical regression analysis

	EMC		Voice				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Control variables							
Gender	-0.04	0.03	-0.10	-0.06	-0.07	-0.05	-0.05
Age	0.01	0.02	0.19*	0.20*	0.19*	0.16*	0.15*
Education	0.07	-0.02	0.15*	0.11	0.11	0.11	0.10
Position	-0.08	-0.15*	0.04	0.00	0.02	0.01	0.02
Tenure	-0.03	0.07	0.01	0.06	0.05	0.07	0.07
Department size	0.07	0.08	-0.02	-0.01	-0.02	-0.04	-0.04
Independent variable							
Ethical leadership		0.56**		0.29***	0.20**	0.10	0.10
Mediator							
EMC					0.16*	0.12	0.13
OC						0.25***	0.27**
Moderation effect							
EMC * OC							-0.16**
R^2	0.02	0.30	0.07	0.15	0.17	0.21	0.24
ΔR^2	0.02	0.28	0.07	0.07	0.02	0.04	0.03
ΔF	0.70	90.37**	2.98**	19.84**	4.75*	13.17***	6.99**

EMC, error management climate; OC, organizational commitment.
 $N = 234$; ** $p < .01$; * $p < .05$ (Two-tailed test).

is positively correlated to EMC ($r = .519, p < .01$). Ethical leadership is also positively associated with voice ($r = .291, p < .01$). In addition, EMC is also positively related to voice ($r = .258, p < .01$). These results are consistent with (and provide initial support to) our hypotheses.

Hypothesis Testing

We conducted a hierarchical multiple regression analysis to test Hypothesis 1, Hypothesis 2, and Hypothesis 3. We did this by entering the control variable, the independent variable (ethical leadership), the mediator variable (EMC), the moderator variable (organizational commitment), and the interaction variable (EMC multiplied by organizational commitment) in separate steps. Hypothesis 1 suggests a positive relationship between ethical leadership and voice. As shown by the results of Model 4 in Table 2, ethical leadership is positively related to voice ($\beta = .29, p < .01$). Thus, Hypothesis 1 is supported.

Hypothesis 4 suggests that EMC mediates the relationship between ethical leadership and voice. As shown by the results of Model 5 in Table 2, EMC is positively related to voice ($\beta = .16, p < .05$). We also tested the relationship between ethical leadership and EMC through a regression analysis. As shown by the results of Model 2 in Table 2, ethical leadership is positively related to EMC ($\beta = .56, p < .01$). These significant betas demonstrate support for Hypotheses 2, 3, and 4.

On Hypothesis 5, the interactive effect of EMC and organizational commitment on voice is also significant ($\beta = -.16, p < .01$, Model 7). Figure 2 and the slope tests show that, where

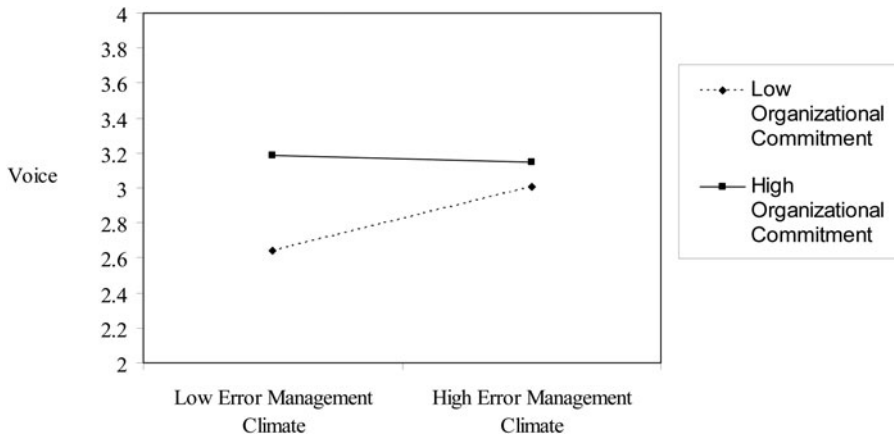


Figure 2. Moderating role of organizational commitment on the relationship between the error management climate and voice.

there is a low organizational commitment (1 SD below the mean), EMC is positively related to voice (simple slope = .21, $p < .01$). When the level of organizational commitment is higher (1 SD above the mean), EMC is unrelated to voice (simple slope = .01, n.s.). Thus, Hypothesis 5 is supported.

Hypothesis 6 predicts that organizational commitment moderates the indirect positive effect of ethical leadership on voice. As shown in Table 3, according to the recommendation of Hayes (2013), the unstandardized indirect effect (ab) and bootstrap confidence intervals are consistent with our prediction that indirect effect of ethical leadership on voice via EMC was significantly moderated by organizational commitment. We found support moderated mediation as the index of moderated mediation is negative, meaning that the indirect relationship between ethical leadership and voice through EMC is a function of organizational commitment (index = $-.0858$; bias and accelerated 90% CI: $-.178, -.0037$, see Table 3). Especially, there is a positive effect of ethical leadership on voice via EMC when organizational commitment is low ($b = .173$, bias and accelerated 90% CI: $-.178, -.0037$), but the bias-corrected bootstrap confidence interval for the conditional indirect effect for mean or high organizational commitment based on 5,000 bootstrap samples included entirely zero, therefore is not significant (see Table 3). Thus, Hypothesis 6 is supported.

Discussion

Drawing from existing leadership theory and voice research, we investigated how ethical leadership enhances the phenomenon of employee voice. In particular, we provided evidence that ethical leadership is most consistently related to employee voice. We found that an EMC plays a mediating role in the relationship between ethical leadership and voice. We also demonstrated the influence of an EMC on voice to be more pronounced on those employees with relatively low organizational commitment. The findings of this research provide some interesting theoretical and practical implications.

Theoretical implications

Our theoretical model and findings offer important contributions to the existing literature. First, we contribute to ethic /moral-based leadership theories by showing that ethical leadership can create the organizational climate of EMC to motivate employees' proactive behavior – voice

Table 3. Bootstrapped indirect effect results^a

Conditional indirect effects	Effect	Boot SE	Boot LL 95% CI	Boot UL 95% CI
Low OC	0.173	0.0681	0.0585	0.3292
Mean OC	0.0874	0.0505	-0.004	0.1988
High OC	0.0018	0.0667	-0.1264	0.1399
Index of moderated mediation	Index	Boot SE	Boot LL 95% CI	Boot UL 95% CI
EMC	-0.0858	0.0446	-0.178	-0.0037

Note: $N = 234$. OC, organizational commitment; EMC, error management climate; Bootstrap sample size = 5,000. LL, lower limit; CI, confident interval; UL, upper limit. Bias-corrected and accelerated confidence intervals are supported.

^aControl variables = gender, age, education, tenure, department size, position.

behavior. As stated in the literature about ethic/moral-based leadership, leaders who act ethically can exert influence their employees' behavior through establishing ethical climates (Bai, Lin, & Liu, 2017) or organizational culture which are typified by learning environment, respect and trust, cooperation, responsibility and accountability (Gottlieb & Sanzgiri, 1996), and so on. Our research introduces a novel construct, the EMC, to explain the relationship between ethical leadership and voice behavior. This is a contextualized climate variable connected with voice behavior. Our research enriches the concept of the type of organizational climate established by ethical leadership to influence their employees' behavior. Also, our research focuses on one outcome of ethical leadership, voice behavior. This adds voice to the pool of outcomes linked to ethic/moral-based leadership theories. This may encourage more research into the outcomes of ethic/moral-based leadership.

Second, our study extends the voice literature by demonstrating that EMC can be a useful mediator between ethical leadership and employee voice behavior. Although previous studies have stressed the importance of the leadership role in voice behavior (Hsiung, 2012), our research uses a more rigorous method (three-phase data collection) to strengthen the evidence of the relationship between ethical leadership and voice (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Our results are also consistent with the prior studies that found leaders can send very strong signals from which employees can tell whether or not the organization will look favorably on voice, which in turn will affect ultimate voice behavior (Milliken, Morrison, & Hewlin, 2003; Ryan & Oestreich, 1998). Besides, previous researchers have looked for mediators between leadership and voice based on the psychological process. We introduce a new variable, EMC, which is related to the overall environment. We believe that the EMC can provide a new explanation of the role and effect of ethical leadership on voice. On one hand, when the leader of the organization is an ethical person who is just and trustworthy, and always highlights and strives for ethical standards, he/she will be far more likely to create a climate in which doing and saying the right thing is valued and encouraged (Brown, Trevino, & Harrison, 2005; Mayer, Kuenzi, & Greenbaum, 2010). Therefore, an ethical leader will in effect nurture a high EMC. On the other hand, the EMC fosters an employee's willingness to report and communicate errors, and also encourages all employees to learn from their and others' errors (Cannon & Edmondson, 2001). When employees are working in an atmosphere of high EMC, they are more willing to engage in the practice of voice. Therefore, we believe our research expands the understanding of the process of ethical leadership's influence on voice.

Furthermore, our research also found that organizational commitment can be a useful buffer between an EMC and voice. That is, when an individual has a low organizational commitment, the EMC can have a stronger influence on employee voice. Our data shows that the relationship between organizational commitment and voice ($\beta = .27, p < .01$) appears to be more robust than the relationship between EMC and voice ($\beta = .13, n.s$). This contrast in robustness may be

because organizational commitment influences voice from the perspective of intrinsic motivation, whereas the influence of EMC on voice may be more likely to involve external motivation. When one shows lower organizational commitment, one will not take the initiative to do things which benefits the organization. One will give voice only under the pressure of the current norms or policy. Therefore, when an employee demonstrates lower organizational commitment, the EMC will affect this employee's voice more strongly. Otherwise, when an employee exhibits high organizational commitment, he/she will voice no matter whether the context is favorable or not. Therefore, in cases of high levels of organizational commitment, EMC is almost unrelated to voice.

Finally, our study contributes to the existing literature relating to the concept and functioning of the EMC. On the one hand, it is created or fostered by ethical leaders. On the other hand, it can tolerate and encourage speaking up, and it makes potential voicers feel valuable and safe, even avoid blaming and punishing. In brief, the EMC is linked closely to employee voice. Now recognized as a new construct, the EMC plays a critical role in employee behavior and organizational performance. EMC is especially crucial for organizations in dynamic environments, where change and innovation are essential elements of success. However, research into the antecedents and outcomes of an EMC are still scarce and limited in scope. Our research has linked ethical leadership and voice to EMC efficiently, thereby enriching EMC research.

Practical implications

In practical terms, the employees' voice is an important means of facilitating an organization's continuous improvement. Our findings provide some suggestions on how organizations can more effectively promote the practice of voicing concerns. Firstly, our research shows the strong connections between ethical leadership and employee behavior. Three recommendations for organizations follow from this. Organizations should pay particular attention to the selection and promotion of managers. Organizations should also set high ethical standards, to detect, hire and promote ethical leaders. Organizations should adopt certain developmental measures to help develop ethical leadership. For example, discussing the possible decisions surrounding ethical dilemmas will help managers become aware of the ethical issues they may face in the future. Explaining the ethical and unethical means to deal with such cases will help managers understand the importance of ethical behavior, as well as the possible adverse outcomes of unethical behavior.

Secondly, our study indicates that voice behavior may occur when the EMC is strengthened. This should remind any organization that when errors are tolerated and constructively responded to and dealt with, or even treated as opportunities for organizational innovation, employee voice behavior will increase. Two recommendations follow from this. Organizations should set up formal and informal error communication channels to make it easier for employees to report and communicate the occurrence of errors. Organizations should also reward employees who report errors and those who help others after an error occurs.

Thirdly, our results indicate that for employees with low organizational commitment, an EMC can exert a greater degree of influence on employee voice behavior. We recommend that, when dealing with new employees or employees who have not yet established feelings of a strong bond with the organization, a formal system or policy should be implemented which aims to create a high EMC to encourage employee voice behavior.


Limitations and directions for future research

Despite the above contributions, this research has several limitations that should be pointed out. First, we only selected data from samples in China. This will limit the generalizability of our results. Secondly, this study was based on data from a single set of respondents, producing the

possibility of a common method bias. Although we collected data from the respondents in three different phases and used statistical tools to check for common method bias, we cannot completely rule out the possibility of such bias. The EMC rating would be more accurate if it could be calculated based on data from multiple sources. Future research should use a multi-level approach to explore the effects of ethical leadership.

In light of the scarcity of research into mechanisms such as we have provided, future scholars could continue to look into the black box of how ethical leadership influences voice behavior. The EMC (as a type of organizational climate) has been proven to play at least a partial mediating role in the relationship between ethical leadership and voice behavior. As such, other climate variables (e.g., an ethical climate and the perception of organizational politics) should be examined as mediating variables.

Also, the perceptions of individual employees themselves will strengthen or undermine the influences of these climate variables. Generally speaking, employees interpret contextual information differently depending on their individual differences and tendencies (Cheng, et al., 2019; Hansen et al., 2016). Therefore, future research should consider the effects of individuals on the relationship between climate variables and voice. For example, constructs such as a proactive personality, goal orientation, psychological capital or trust propensity could be selected as relationship moderators.

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References

- Ang, S., Van Dyne, L., & Begley, T. M. (2003). The employment relationships of foreign workers versus local employees: A field study of organizational justice, job satisfaction, performance, and OCB. *Journal of Organizational Behavior*, 24(5), 561–583.
- Argyris, C., & Schön, D. (1987). Reasoning, action strategies, and defensive routines: The case of OD practitioners. *Research in Organizational Change and Development*, 1(1), 89–128.
- Avery, D. R., & Quiñones, M. A. (2002). Disentangling the effects of voice: The incremental roles of opportunity, behavior, and instrumentality in predicting procedural fairness. *Journal of Applied Psychology*, 87(1), 81–86.
- Bai, Y., Lin, L., & Liu, T. J. (2017). Leveraging the employee voice: A multi-level social learning perspective of ethical leadership. *The International Journal of Human Resource Management*, Advance online publication. 10.1080/09585192.2017.1308414.
- Bandura, A. (1989). *Social foundations of thought and action: A social-cognitive view*. Englewood Cliffs, NJ: Prentice-Hall.
- Brislin, R. W. (1980). Cross-cultural research methods. In *Environment and culture* (pp. 47–82). Springer, Boston, MA.
- Brown, M. E., Trevino, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, 97(2), 117–134.
- Cannon, M. D., & Edmondson, A. C. (2001). Confronting failure: Antecedents and consequences of shared beliefs about failure in organizational work groups. *Journal of Organizational Behavior*, 22(2), 161–177.
- Cardona, P. (2000). Transcendental leadership. *Leadership and Organization Development Journal*, 21(4), 201–206.
- Chen, A. S. Y., & Hou, Y. H. (2016). The effects of ethical leadership, voice behavior and climates for innovation on creativity: A moderated mediation examination. *The Leadership Quarterly*, 27(1), 1–13.
- Cheng, J., Bai, H., & Yang, X. (2019). Ethical Leadership and Internal Whistleblowing: A Mediated Moderation Model. *Journal of Business Ethics*, 155(1): 115–130.
- Cheng, J. W., Chang, S. C., Kuo, J. H., & Cheung, Y. H. (2014). Ethical leadership, work engagement, and voice behavior. *Industrial Management and Data Systems*, 114(5), 817–831.
- Cigularov, K. P., Chen, P. Y., & Rosecrance, J. (2010). The effects of error management climate and safety communication on safety: A multi-level study. *Accident Analysis and Prevention*, 42(5), 1498–1506.
- DeConinck, J. B. (2015). Outcomes of ethical leadership among salespeople. *Journal of Business Research*, 68(5), 1086–1093.
- Demirtas, O., & Akdogan, A. A. (2015). The effect of ethical leadership behavior on ethical climate, turnover intention, and affective commitment. *Journal of Business Ethics*, 130(1), 59–67.
- Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open? *Academy of Management Journal*, 50(4), 869–884.
- Detert, J. R., & Trevino, L. K. (2010). Speaking up to higher-ups: How supervisors and skip-level leaders influence employee voice. *Organization Science*, 21(1), 249–270.
- de Vries, G., Jehn, K. A., & Terwel, B. W. (2012). When employees stop talking and start fighting: The detrimental effects of pseudo voice in organizations. *Journal of Business Ethics*, 105(2), 221–230.

- Duan, J., Li, C., Xu, Y., & Wu, C. H. (2017). Transformational leadership and employee voice behavior: A Pygmalion mechanism. *Journal of Organizational Behavior*, 38(5), 650–670.
- Dutton, J. E., Ashford, S. J., O'Neill, R. M., Hayes, E., & Wierba, E. E. (1997). Reading the wind: How middle managers assess the context for selling issues to top managers. *Strategic Management Journal*, 18(5), 407–423.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383.
- Eisenbeiss, S. A. (2012). Re-thinking ethical leadership: An interdisciplinary integrative approach. *The Leadership Quarterly*, 23(5), 791–808.
- Erdogan, B., Ozyilmaz, A., Bauer, T. N., & Emre, O. (2018). Accidents happen: Psychological empowerment as a moderator of accident involvement and its outcomes. *Personnel Psychology*, 71(1), 67–83.
- Farrell, D. (1983). Exit, voice, loyalty, and neglect as responses to job dissatisfaction: A multidimensional scaling study. *Academy of Management Journal*, 26(4), 596–607.
- 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(4), 1013–1034.
- Frazier, M. L., & Bowler, W. M. (2015). Voice climate, supervisor undermining, and work outcomes: A group-level examination. *Journal of Management*, 41(3), 841–863.
- Frese, M., Brodbeck, F., Heinbokel, T., Mooser, C., Schleiffenbaum, E., & Thiemann, P. (1991). Errors in training computer skills: On the positive function of errors. *Human-Computer Interaction*, 6(1), 77–93.
- Frese, M., & Keith, N. (2015). Action errors, error management, and learning in organizations. *Annual Review of Psychology*, 66, 661–687.
- Fry, L.W. (2003). Toward a theory of spiritual leadership. *The Leadership Quarterly*, 14, 693–727.
- Gold, A., Gronewold, U., & Salterio, S. E. (2013). Error management in audit firms: Error climate, type, and originator. *The Accounting Review*, 89, 303–330.
- Gottlieb, J. Z., & Sanzgiri, J. (1996). Towards an ethical dimension of decision making in organizations. *Journal of Business Ethics*, 15(12), 1275–1285.
- Gu, Q., Tang, T. L. P., & Jiang, W. (2015). Does moral leadership enhance employee creativity? Employee identification with leader and leader-member exchange (LMX) in the Chinese context. *Journal of Business Ethics*, 126(3), 513–529.
- Guchait, P., Paşamehmetoğlu, A., & Lanza-Abbott, J. (2015). The importance of error management culture in organizations: The impact on employee helping behaviors during service failures and recoveries in restaurants. *Journal of Human Resources in Hospitality and Tourism*, 14(1), 45–67.
- Guenter, H., Schreurs, B., van Emmerik, I. J., & Sun, S. (2017). What does it take to break the silence in teams: Authentic leadership and/or proactive followership?. *Applied Psychology*, 66(1), 49–77.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate Data Analysis*, 5th ed. NY: Prentice Hall International.
- Hansen, S. D., Dunford, B. B., Alge, B. J., & Jackson, C. L. (2016). Corporate social responsibility, ethical leadership, and trust propensity: A multi-experience model of perceived ethical climate. *Journal of Business Ethics*, 137(4), 649–662.
- Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York, NY: The Guilford Press.
- Heron, J., & Reason, P. (1997). A participatory inquiry paradigm. *Qualitative Inquiry*, 3(3), 274–294.
- Hirschman, A. (1970). *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, MA: Harvard University Press.
- Hsiung, H. H. (2012). Authentic leadership and employee voice behavior: A multi-level psychological process. *Journal of Business Ethics*, 107(3), 349–361.
- Hsiung, H. H., & Tsai, W. C. (2017). The joint moderating effects of activated negative moods and group voice climate on the relationship between power distance orientation and employee voice behavior. *Applied Psychology*, 66(3), 487–514.
- Huang, L., & Paterson, T. A. (2017). Group ethical voice: Influence of ethical leadership and impact on ethical performance. *Journal of Management*, 43(4), 1157–1184.
- Javed, B., Rawwas, M. Y., Khandai, S., Shahid, K., & Tayyeb, H. H. (2018). Ethical leadership, trust in leader and creativity: The mediated mechanism and an interacting effect. *Journal of Management and Organization*, 24(3), 388–405.
- Kacmar, K. M., Bachrach, D. G., Harris, K. J., & Zivnuska, S. (2011). Fostering good citizenship through ethical leadership: Exploring the moderating role of gender and organizational politics. *Journal of Applied Psychology*, 96(3), 633.
- Kanungo, R. N., & Conger, J. A. (1993). Promoting altruism as a corporate goal. *The Academy of Management Executive*, 7(3), 37–48.
- Kaptein, M. (2011). From inaction to external whistleblowing: The influence of the ethical culture of organizations on employee responses to observed wrongdoing. *Journal of Business Ethics*, 98(3), 513–530.
- Kehoe, R. R., & Wright, P. M. (2013). The impact of high-performance human resource practices on employees' attitudes and behaviors. *Journal of Management*, 39(2), 366–391.
- Keith, N., & Frese, M. (2011). Enhancing firm performance and innovativeness through error management culture. *Handbook of Organizational Culture and Climate*, 9, 137–157.

- Kish-Gephart, J. J., Detert, J. R., Treviño, L. K., & Edmondson, A. C. (2009). Silenced by fear: The nature, sources, and consequences of fear at work. *Research in Organizational Behavior*, 29, 163–193.
- Ko, C., Ma, J., Kang, M., English, A. S., & Haney, M. H. (2017). How ethical leadership cultivates healthy guanxi to enhance OCB in China. *Asia Pacific Journal of Human Resources*, 55(4), 408–429.
- Lam, L.W., Loi, R., Chan, K.W., & Liu, Y. (2016). Voice more and stay longer: how ethical leaders influence employee voice and exit intentions. *Business Ethics Quarterly*, 26(03), 277–300.
- Lee, D., Choi, Y., Youn, S., & Chun, J.U. (2017). Ethical leadership and employee moral voice: The mediating role of moral efficacy and the moderating role of leader–follower value congruence. *Journal of Business Ethics*, 141(1), 47–57.
- Lepine, J. A., & Van Dyne, L. (2001). Voice and cooperative behavior as contrasting forms of contextual performance: Evidence of differential relationships with Big five personality characteristics and cognitive ability. *Journal of Applied Psychology*, 86(2), 326–336.
- Li, Y., & Sun, J.M. (2015). Traditional Chinese leadership and employee voice behavior: A cross-level examination. *The Leadership Quarterly*, 26(2), 172–189.
- Liang, J., Farh, C. L., & Farh, J. L. (2012). Psychological antecedents of promotive and prohibitive voice: A two-wave examination. *Academy of Management Journal*, 55(1), 71–92.
- Liu, C. H. (2007). Transactional, Transformational, Transcendental Leadership: Motivation Effectiveness and Measurement of Transcendental Leadership. In *Paper presented at 'Leading the Future of the Public Sector: The Third Transatlantic Dialogue'* (pp. 1–26). Newark: University of Delaware.
- Liu, W., Zhu, R. H., & Yang, Y. K. (2010). I warn you because i like you: Voice behavior, employee identifications, and transformational leadership. *The Leadership Quarterly*, 21, 189–202.
- May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety, and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, 77(1), 11–37.
- Mayer, D. M., Aquino, K., Greenbaum, R. L., & Kuenzi, M. (2012). Who displays ethical leadership, and why does it matter? An examination of antecedents and consequences of ethical leadership. *Academy of Management Journal*, 55(1), 151–171.
- Mayer, D. M., Kuenzi, M., & Greenbaum, R. L. (2010). Examining the link between ethical leadership and employee misconduct: The mediating role of ethical climate. *Journal of Business Ethics*, 95(1), 7–16.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61–89.
- Meyer, J.P., Allen, N.J., & Smith, C.A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of applied psychology*, 78(4), 538–551.
- Milliken, F. J., Morrison, E. W., & Hewlin, P. (2003). An exploratory study of employee silence: Issues that employees don't communicate upward and why. *Journal of Management Studies*, 40(6), 1453–1476.
- Morrison, E. W. (2011). Employee voice behavior: Integration and directions for future research. *The Academy of Management Annals*, 5(1), 373–412.
- Morrison, E. W., & Milliken, F. J. (2000). Organizational silence: A barrier to change and development in a pluralistic world. *Academy of Management Review*, 25(4), 706–725.
- Morrison, E. W., & Phelps, C. C. (1999). Taking charge at work: Extra role efforts to initiate workplace change. *Academy of Management Journal*, 42(4), 403–419.
- Morrison, E.W., Wheeler-Smith, S.L., & Kamdar, D. (2011). Speaking up in groups: A cross-level study of group voice climate and voice. *Journal of Applied Psychology*, 96(1), 183–191.
- Mowday, R., Porter, L. W., & Steers, R. M. (1982). Employee-organization linkages. New York: Academic Press.
- Near, J. P., Rehg, M. T., Van Scotter, J. R., & Miceli, M. P. (2004). Does type of wrongdoing affect the whistle-blowing process? *Business Ethics Quarterly*, 14(02), 219–242.
- Neubert, M. J., Wu, C., & Roberts, J. A. (2013). The influence of ethical leadership and regulatory focus on employee outcomes. *Business Ethics Quarterly*, 23(2), 269–296.
- Ng, T. W., & Feldman, D. C. (2009). How broadly does education contribute to job performance? *Personnel Psychology*, 62(1), 89–134.
- Oc, B., Bashshur, M. R., & Moore, C. (2015). Speaking truth to power: The effect of candid feedback on how individuals with power allocate resources. *Journal of Applied Psychology*, 100(2), 450.
- Perlow, L., & Williams, S. (2003). Is silence killing your company? *Ieee Engineering Management Review*, 31(4), 18–23.
- Piccolo, R. F., Greenbaum, R. L., & Hartog, D. N. D. (2010). The relationship between ethical leadership and core job characteristics. *Journal of Organizational Behavior*, 31(2–3), 259–278.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.
- Ryan, K. D., & Oestreich, D. K. (1998). Driving fear out of the workplace: Creating the high-trust, high-performance organization. Jossey-Bass.
- Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21(7), 600–619.
- Sanders, J. E., Hopkins, W. E., & Geroy, G. D. (2003). From transactional to transcendental: Toward an integrated theory of leadership. *Journal of Leadership and Organizational Studies*, 9(4), 21–31.

- Schaubroeck, J. M., Hannah, S. T., Avolio, B. J., Kozlowski, S. W., Lord, R. G., Treviño, L. K., & Peng, A. C. (2012). Embedding ethical leadership within and across organization levels. *Academy of Management Journal*, 55(5), 1053–1078.
- Schwartz, J., & Wald, M. L. (2003). The Nation: NASA's curse? 'Groupthink' is 30 years old, and still going strong. *New York Times*, March 9: 5.
- Seifert, D. L., Sweeney, J. T., Joireman, J., & Thornton, J. M. (2010). The influence of organizational justice on accountant whistleblowing. *Accounting, Organizations and Society*, 35(7), 707–717.
- Shin, Y., Sung, S. Y., Choi, J. N., & Kim, M. S. (2015). Top management ethical leadership and firm performance: Mediating role of ethical and procedural justice climate. *Journal of Business Ethics*, 129(1), 43–57.
- Taylor, M. S., Tracy, K. B., & Renard, M. K. (1995). Due process in performance appraisal: A quasi-experiment in procedural justice. *Administrative Science Quarterly*, 40(3), 495–523.
- Treviño, L. K., Brown, M., & Hartman, L. P. (2003). A qualitative investigation of perceived executive ethical leadership: Perceptions from inside and outside the executive suite. *Human relations*, 56(1), 5–37.
- van Dyck, C., Frese, M., Baer, M., & Sonnentag, S. (2005). Organizational error management culture and its impact on performance: A two-study replication. *Journal of Applied Psychology*, 90(6), 1228–1240.
- Walumbwa, F. O., Hartnell, C. A., & Misati, E. (2017). Does ethical leadership enhance group learning behavior? Examining the mediating influence of group ethical conduct, justice climate, and peer justice. *Journal of Business Research*, 72: 14–23.
- Walumbwa, F. O., Mayer, D. M., & Wang, P. (2011). Linking ethical leadership to employee performance: The roles of leader–member exchange, self-efficacy, and organizational identification. *Organizational Behavior and Human Decision Processes*, 115(2), 204–213.
- Walumbwa, F.O., Morrison, E. W., & Christensen, A. L. (2012). Ethical leadership and group in-role performance: The mediating roles of group conscientiousness and group voice. *Leadership Quarterly*, 23(5): 953–964.
- Walumbwa, F.O., & Schaubroeck, J. (2009). Leader personality traits and employee voice behavior: Mediating roles of ethical leadership and work group psychological safety. *Journal of Applied Psychology*, 94(5), 1275–1286.
- Wu, L. Z., Kwan, H. K., Yim, F. H. K., Chiu, R. K., & He, X. (2015). CEO ethical leadership and corporate social responsibility: A moderated mediation model. *Journal of Business Ethics*, 130(4), 819–831.
- Zapf, D., Brodbeck, F. C., Frese, M., Peters, H., & Prümper, J. (1992). Errors in working with office computers: A first validation of a taxonomy for observed errors in a field setting. *International Journal of Human-Computer Interaction*, 4(4), 311–339.
- Zhao, B., & Olivera, F. (2006). Error reporting in organizations. *Academy of Management Review*, 31(4), 1012–1030.
- Zhu, W., He, H., Treviño, L. K., Chao, M. M., & Wang, W. (2015). Ethical leadership and follower voice and performance: The role of follower identifications and entity morality beliefs. *The Leadership Quarterly*, 26(5), 702–718.