

Why and When Leader's Affective States Influence Employee Upward Voice

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ABSTRACT

Although researchers have argued that employees often carefully examine social contexts before speaking up to leaders, the role of leaders' affective states has received little attention. The current research addresses this important issue from an emotion-as-social-information perspective by exploring whether, why, and when leaders' affect influences employees' voice behavior. By collecting data of 640 daily interactions from *both* sides of 85 leader-employee dyads using the experience sampling method (ESM) through mobile surveys, we found that leaders' positive affect was positively related to employees' voice behavior. Furthermore, such a relationship could be accounted for through employees' psychological safety directly via emotional contagion mechanism (through employees' own positive affect) but not directly via signaling mechanism (through employees' assessment of leaders' positive affect), and the effects of both employees' own positive affect and their assessments of leaders' positive affect on psychological safety were stronger when the leader-member exchange relationship was weak. Interestingly, we also found that leaders' negative affect was positively related to employees' voice, but neither emotional contagion nor signaling mechanisms explained this effect. These findings highlight the important role of leaders' affect in the voice process and also provide insights for when employees would choose to speak up to their leaders.

Keywords: Employee voice, affect, leadership, LMX

In many organizations, employees are uniquely positioned to identify emerging problems and opportunities that can critically influence the effectiveness of work processes and outcomes (Edmondson, 2003). In this context, *upward voice*, or employees' expression of constructive work-related ideas to organizational leaders (Detert & Burris, 2007; Tangirala & Ramanujam, 2012), plays a critical role in linking employees' private knowledge and insights with leaders' organizational influence (Ryan & Oestreich, 1998). To understand what may promote or discourage employees from speaking up to their leaders, most of the existing voice research has taken a between-individual approach to explore the antecedents of voice (Morrison, 2011). These studies have identified employee characteristics, such as self-esteem (LePine & Van Dyne, 1998) and dispositional factors (e.g., LePine & Van Dyne, 2001), and leader characteristics, such as openness to change (e.g., Detert & Burris, 2007; Liu, Zhu, & Yang, 2010) and leadership styles (e.g., Fast, Burris & Bartel, 2014; Tangirala & Ramanujam, 2012; Walumbwa & Schaubroeck, 2009), as important predictors of voice.

Although this line of research has provided valuable insights into the relatively stable antecedents of voice, the phenomenon that both employees and leaders can behave differently in the moment has almost been neglected. In reality, even when facing the same leader, an employee may be more likely to speak up to the leader in some interaction episodes than in other episodes (Detert & Edmondson, 2011; Detert & Treviño, 2010). Some prior discussions, for example, have suggested that employees "read the wind" to discern whether a particular situation is favorable to sharing their suggestions, opinions, or concerns with leaders (Dutton, Ashford, Wierba, O'Neill, & Hayes, 1997; Milliken, Morrison, & Hewlin, 2003). However, little attention has been paid to the possible fluctuation of employee voice from one episode to another. As a consequence, we still know little about whether more dynamic, fluctuating leader-relevant factors, such as leaders' affect, influence employee upward voice (Morrison, 2011).

Addressing this fluctuation in employee voice as dependent on leader-relevant factors is important for both practical and theoretical reasons. Practically, voice contributes to organizational effectiveness (e.g., Detert, Burris, Harrison, & Martin, 2013), and leaders' affective states have been argued to play a critical role in shaping employee behaviors (e.g., Van Kleef, Homan, Beersma, van Knippenberg, van Knippenberg, & Damen, 2009). Theoretically, recent studies in social psychology have suggested that individuals, especially those with less power, pay particular attention to the affect of others in order to behave appropriately in social interactions (e.g., Melwani & Barsade, 2011; Van Kleef, De Dreu, & Manstead, 2004, 2010). We expect that during interactions between employees and leaders, leaders' affect may importantly influence employee voice (Gooty, Connelly, Griffith, & Gupta, 2010). Therefore, the first purpose of this research is to examine whether leaders' affect influences voice by taking a within-individual or episodic approach. Accordingly, we conceptualize voice as an episodic, social-interactional process between leaders and employees, in which employees share constructive suggestions, ideas, and concerns with leaders (c.f. Morrison, 2011).

We draw on the emotion-as-social-information (EASI) model (Van Kleef et al., 2009; Van Kleef et al., 2010), which contends that individuals' emotions influence others via two distinct mechanisms. One mechanism is the *emotional contagion process*, by which leaders' affect implicitly evokes employees' affect and then influences employees' consequent attitudes and behaviors (Hatfield, Cacioppo, & Rapson, 1994), while the other is the *signaling process*, by which leaders' affect is cognitively assessed by employees and then influences employees' attitudes and behaviors (Van Kleef et al., 2009). More recently, scholars have also argued that affect may influence *psychological safety*, defined in this context as employees' belief that they can show and express themselves to leaders without fear of negative consequences during interactions with leaders (Kahn, 1990; Kish-Gephart,

Detert, Treviño, & Edmondson, 2009; Liang, Farh, & Farh, 2012) and thus voice behavior (Detert & Burris, 2007; Liang et al., 2012). Therefore, the second purpose of this research is to contribute to the voice and leadership literature by integrating the EASI model and psychological safety studies to explain why leaders' affect influences voice. More specifically, we examine the indirect effect of leaders' affect on employee voice through psychological safety via both emotional contagion and signaling processes.

Another critical issue is identifying when leaders' affect is more likely to influence employees. Gooty and colleagues (2010), in a recent review of emotion research in the leadership literature, suggest that we still know little about the contextual contingencies for the effects of leaders' affect. Answering this call, we draw on the EASI perspective (Van Kleef et al., 2010) to examine when leaders' affect has stronger or weaker influences on voice. Specifically, this perspective argues that the social functions of affect vary contingent upon the relationships between interaction parties (Van Kleef et al., 2004, 2009, 2010). Applying this tenet, we propose that the strengths of both emotional contagion and signaling mechanisms depend on the quality of the leader-member exchange (LMX)—the quality of the social exchange relationship between leaders and employees (Graen & Uhl-Bien, 1995), such that the paths would be stronger when LMX quality is weaker.

In summary, the current study presents a multilevel framework to investigate whether, why, and when leaders' affect influences employees' voice behavior. Our study extends the current voice and leadership literature in four unique ways. First, most previous voice research has taken a between-individual approach by focusing on the stable characteristics of leaders or employees, but it cannot explain all of the variance of voice (Morrison, 2011). By taking a within-individual approach to investigate voice at the episodic level, our study not only captures the hitherto missing within-individual variance of employee voice, but also advances prior voice research by examining new antecedents of voice at the episodic level.

Second, we examine both the positive and negative affect of leaders as critical antecedents of voice. This investigation not only extends the emerging conceptual discussions that focus primarily on how employees' *own* affect may lead to voice (Kish-Gephart et al., 2009; Harvey, Martinko, & Douglas, 2009), but also enlarges the scope of recent research on positive mood and voice (e.g., Liu, Tangirala, Lam, Chen, Jia, & Huang, 2015) by explicitly scrutinizing the effects of both the positive and negative affect of leaders. Our study thus offers a timely response to the recent call for exploring the connection between affect and voice (Morrison, 2011).

Third, by integrating the EASI model (Van Kleef et al., 2010) with research on psychological safety (Liang et al., 2012; c.f. Edmondson, 1999) and LMX (Graen & Uhl-Bien, 1995), we help explain why and when leaders' affect influences voice. Our study extends existing voice research (e.g., Detert & Burris, 2007; Liang et al., 2012) by identifying leaders' affect as a driving force of employee psychological safety and also contributes to the existing emotion research (e.g., Van Kleef et al., 2009) by identifying psychological safety as a consequence of leaders' affect via both emotional contagion and signaling mechanisms. Moreover, our study advances prior voice research, which has addressed only the main effect of LMX on voice (Burris, Detert, & Chiaburu, 2008; Van Dyne, Kamdar, & Joireman, 2008), by theorizing that LMX, in conjunction with leaders' affect, influences upward voice.

Finally, to unpack the interpersonal dynamics between leaders and employees in the voice process, we employed the event-contingent version of the experience sampling method (ESM, Wheeler & Reis, 1991) to collect field data on immediate interactional episodes from both sides of leader-employee dyads in real work settings. Our research design sheds light on how to resolve concerns about external validity that many experimental studies in the emotion research have encountered (Chatman & Flynn, 2005), as well as how to minimize

the common method bias that most ESM studies have faced (Bolger, Davis, & Rafaeli, 2003; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Figure 1 summarizes the hypothesized relationships proposed in this study. We tested these hypotheses in a field study using multiple-source, experience sampling data from leader-member interactions for two weeks in five information technology (IT) companies.

Theoretical Development and Hypotheses

Voice and the Emotion-as-Social-Information Model

Voice aims to challenge the status quo in organizations and is thus risky (Van Dyne, Cummings, & McLean Parks, 1995). Leaders often perceive voice as threats and thus respond negatively to employees who speak up (Burriss, 2012; Milliken et al., 2003; Morrison & Milliken, 2000). Given the risky nature of voice, employees would carefully evaluate the social contexts before speaking up (Ashford et al., 1998; Liu et al., 2015). Therefore, it is particularly meaningful to examine how leaders' affective states influence voice, because voice in essence is a form of social interaction between employees and leaders (Dutton & Ashford, 1993; Morrison & Milliken, 2000) and leaders' affective states provide important social information that influences employee behaviors during leader-member interactions (Gooty et al., 2010; Van Kleef et al., 2009).

Affect plays an important role in everyday life, and it is not only often evoked by social interactions, but also serves as a form of communication that influences the behavior of others in social interactions (Fridlund, 1994; Frijda, 1986; Parkinson, 1996; Van Kleef, De Dreu, & Manstead, 2010). An individual's display of positive affect, for example, signals security, openness, or an intention of affiliation to others; by contrast, an individual's display of negative affect signals a threat, a fixed mind, or an intention of distance to others (Forgas, 1985; Forgas & George, 2001). When others unconsciously capture or consciously make

inferences from a person's displays of affect, it can influence their attitudes or behaviors (Van Kleef et al., 2009).

Synthesizing and extending this emerging literature on the social functions of affect, Van Kleef and colleagues (Van Kleef, 2009; Van Kleef et al., 2009, 2010) propose the EASI model. One premise of the EASI model is that affect serves critical *interpersonal* functions in social interactions (Keltner & Haidt, 1999; Manstead, 1991; Oatley & Johnson-Laird, 1987; Van Kleef, 2009), because affect conveys information to actors about the target's current feelings, social intentions, and orientation toward the relationship (Ames & Johar, 2009; Van Kleef et al., 2004). Moreover, according to this model, an individual's affect influences others in two distinct ways: emotional contagion and signaling processes (Van Kleef et al., 2009, 2010).

In the following, we apply the EASI model to theorize the mechanisms by which leaders' affect influences employees' voice. We investigate both the positive and negative affect of leaders. Positive and negative affect is quite different in their characteristics, social meanings, and functions (e.g., Fredrickson, 1998; Forgas & George, 2001; Van Kleef et al., 2010). In addition, the states comprising negative affect are more differentiated than the states comprising positive affect (e.g., de Rivera et al., 1989; Ellsworth & Smith, 1988; Fredrickson, 1998). Therefore, in the following we first propose hypotheses on leaders' positive affect and then raise several research questions related to leaders' negative affect.

Leaders' Positive Affect and the Emotional Contagion Process

A person may unintentionally and automatically "catch" others' emotions, and this process is referred to as emotional contagion (Hatfield et al., 1994). Emotional contagion takes place when a person unconsciously mimics another individual's emotions and assumes that an individual's emotions are a consequence of facial, vocal, or gestural communications (Anderson, Keltner, & John, 2003; Kelly & Barsade, 2001). Both laboratory (e.g., Sy, Côté,

& Saavedra, 2005) and field (e.g., Barger & Grandey, 2006; Song, Foo, & Uy, 2008; Totterdell, Kellet, Teuchmann, & Briner, 1998) studies have demonstrated the existence of an emotional contagion process. Moreover, emotions are more likely to be transferred from high-power individuals to low-power ones, rather than the other way around (Anderson et al., 2003). That is, low-power individuals, who are more dependent on high-power individuals than the reverse, are more attentive to and are more likely to mimic the emotions of high-power individuals (Anderson & Thompson, 2004; Van Kleef et al., 2004). In the context of leader-member interactions, for example, Sy et al. (2005) found that when leaders were in a positive mood (rather than a negative mood), their group members had more positive experiences. Based on the above discussions, we predict that leaders' positive affect transfers to employees during leader-employee interactions and that employees experience positive affect as a result of automatic mimicking and unconscious learning of leaders' positive tones, gestures, or facial expressions (Kelly & Barsade, 2001; Sy et al., 2005).

We further propose that leaders' positive affect influences employee psychological safety through employees' own positive affect. That is, when a leader's positive affect evokes an employee's positive affect, the employee, in turn, will be more likely to feel safe when interacting with the leader. Psychological safety reflects the extent to which employees believe that they can safely express themselves to leaders without fear of negative consequences (Kahn, 1990; Kish-Gephart, Detert, Treviño, & Edmondson, 2009; Liang, Farh, & Farh, 2012). An individual's own affect provides him or her with information about situations, and such information further influences cognitive processes and behavior (Schwarz & Clore, 1983, 2003). Research has shown that an individual often attunes his or her thought processes and behaviors to the information provided by his or her own affect in order to function and adapt to an environment effectively (Schwarz, 2002). Positive affect basically informs people that an environment is safe and things are going well (Clore, Gaspar,

& Garvin, 2001; Schwarz & Clore, 1983, 2003). Supporting this argument, research has shown that when people are having positive feeling states, they perceive relatively neutral consumer products more positively (Isen, Shalke, Clark, & Karp, 1978), perceive others more positively (Forgas & Bower, 1987), and believe favorable outcomes are more likely (Erez & Isen, 2002; Rottenstreich & Hsee, 2001) than people who are not experiencing positive affective states. Based on these discussions, we propose that employees' own positive affect, evoked through contagion by leaders' positive affect, help employees feel psychologically safe during interactions with leaders.

Hypothesis 1: In an interactional episode, an employee's positive affect mediates the positive relationship between the leader's positive affect and the employee's psychological safety.

Psychological safety is a core psychological mechanism that drives employees to speak out (Edmondson, 1999; Morrison & Milliken, 2000). As Milliken et al.'s (2003) qualitative study documented, employees usually are afraid to convey negative, challenging, or unpopular information to colleagues, because they expect negative consequences associated with voice. When they feel safe enough, they are more likely to share their opinions, suggestions, and concerns freely (Detert & Burris, 2007; Liang et al., 2012; Nembhard & Edmondson, 2006). When interacting with leaders, employees who experience psychological safety thus are more likely to express their opinions, suggestions, and concerns.

Hypothesis 2: In an interactional episode, an employee's positive affect and psychological safety sequentially mediate the positive relationship between the leader's positive affect and the employee's upward voice (i.e., leader's positive affect → employee's positive affect → psychological safety → voice).

Leader's Positive Affect and the Signaling Process

Another mechanism, according to the EASI model, is a signaling process. Affect conveys meaningful information to a social interaction partner about an individual's current feelings, social intentions, and orientation toward the relationship (Ames & Johar, 2009; Van Kleef et al., 2004). In response, the partner consciously makes judgments or takes follow-up actions based on the information inferred from the individual's emotions (Filipowicz, Barsade, & Melwani, 2011; Miron-Spektor, Efrat-Treister, Rafaeli, & Schwarz-Cohen, 2011; Van Kleef et al., 2009). Previous research has provided evidence that signaling process is distinctive from the emotional contagion process (Eberly & Fong, 2013; Van Kleef et al., 2009). For example, in a lab setting, Van Kleef and colleagues (2009) manipulated leader's emotions and showed that teams with high epistemic motivation were more influenced by the signaling process whereas those with low epistemic motivation were more influenced by the emotional contagion process.

In the context of voice, to avoid leaders' misunderstanding or confusion, employees often closely monitor leaders' affective states to assess whether the context is favorable for voice (c.f. Ashford, Rothbard, Piderit, & Dutton, 1998; Dutton et al., 1997). The initial step of cognitively processing the meaning of leaders' affect consists of an employee recognizing such affect (Elfenbein, 2007). In other words, employees need to be consciously aware of leaders' affective states before they can make sense of them (Cropanzano, Weiss, Hale, & Reb, 2003; Elfenbein, 2007; Lazarus, 1991). In interactions between a leader and an employee, the employee may assess the leader's affect by vocal tone, facial expressions, or gestures (Ambady & Rosenthal, 1992; Gooty et al., 2010). When a leader displays a positive affect, an employee is likely to infer that the leader is happy, excited, or pleased, and such an inference would further influence this employee's subsequent attitudes and behaviors (Van Kleef et al., 2009).

Therefore, we argue that in addition to the emotional contagion pathway, leaders'

positive affect also influences employees' psychological safety through a signaling pathway. That is, when an employee assesses a leader's positive affect, the employee, in turn, is more likely to experience psychological safety. Previous research has suggested that people tend to pay selective attention to mood-consistent details (Bower, 1981; Forgas & Bower, 1987; Forgas & George, 2001). For example, given that they are observing actors engaging in identical behaviors, people in a positive mood selectively look for lenient and optimistic explanations, while those in a less positive mood tend to make more critical attributions (Forgas, 1998; Forgas, Bower, & Moylan, 1990). From the employee's perspective, the employee would expect the leader's affect to largely influence how the leader will respond to voice. The leader would be expected to pay attention to the positive aspects of voice (e.g., that the employee is making constructive suggestions) when the leader is experiencing positive affect, but more to the negative aspects (e.g., that the employee is showing off or trying to embarrass the leader) when the leader is in a less positive affective state.

In addition, positive affect enables individuals to be flexible and open to new ideas (Fredrickson, 2001). The employee would expect the leader to be more likely to accept and take actions on voice when the leader is in a more positive affective state. Indeed, Ames and Johar (2009) found that compared with targets displaying negative emotions, targets displaying positive emotions are more likely to be ascribed to have prosocial intentions. In addition, Gino and Schweitzer (2008) reported that compared with people who felt angry, people who felt gratitude were more receptive to advice. Another recent research by Liu et al. (2015) further suggests that a target member's positive mood was positively related to a focal member's psychological safety with this target member. Based on the discussions above about the signaling pathway and the effect of psychological safety on voice, we propose the following:

Hypothesis 3: In an interactional episode, an employee's assessment of the positive affect of the leader mediates the positive relationship between the leader's positive affect and the employee's psychological safety.

Hypothesis 4: In an interactional episode, an employee's assessment of the positive affect of the leader and the employee's psychological safety sequentially mediates the positive relationship between leader's positive affect and the employee's upward voice (i.e., leader's positive affect → employee's assessment of leader's positive affect → psychological safety → voice).

Moderating Role of LMX Quality

According to the EASI model, the interpersonal effects of emotions depend on the relations between the actor and the partner, because the nature of relations fundamentally determines the meaning and social consequences of emotional expressions (Van Kleef et al., 2009, 2010). A smile, for example, is likely to signify warmth to a friend, but disdain to an enemy. Therefore, we further propose that although both emotional contagion and signaling processes are important mechanisms by which leaders' positive affect influences employees' psychological safety and thereby upward voice, the strength of each path may vary across different leader-employee dyads, contingent upon LMX quality.

Leaders may develop relationships with a variety of employees with different qualities (Dansereau, Graen, & Haga, 1975; Gerstner & Day, 1997). Low-quality LMX relationships are characterized by economic exchange and feature low levels of trust, support, commitment, and loyalty (Cropanzano & Mitchell, 2005; Uhl-Bien & Maslyn, 2003). By contrast, high-quality LMX relationships increasingly engender feelings of mutual obligation and reciprocity (Liden, Sparrowe, & Wayne, 1997). Such high-quality relationships result in increased affective attachments between leaders and followers, with such key features as trust, support, commitment, and loyalty (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012). We

argue that LMX quality would respectively moderate the indirect effect of employees' own positive affect (the emotional contagion pathway) and the indirect effect of their assessment of leaders' positive affect (the signaling pathway) on voice via psychological safety.

For the emotional contagion pathway, the EASI theory suggests that the extent to which an actor's emotional reactions would further influence his or her following attitudes or behaviors depends on the relational context (Van Kleef et al., 2010). In relationships where informational cues are already stored and available for judgment, during interactions, actors use a direct processing strategy without giving much consideration to their own affective states in making evaluations; but in relationships involving complicated, unusual targets that mandate more elaborate processing, actors rely more upon their affective states to make judgments (e.g., Dunn & Schweitzer, 2005; Forgas, 1995; Van Kleef et al., 2009). Having a prototype, for example, gives people structuralized and simplified information about others, and therefore, when actors evaluate others consistent with a prototype, they are less likely to use their own affect to make judgments; but when they encounter those not consistent with a prototype, they engage in substantive processing by utilizing their own affect (Forgas, 1992). Similarly, Dunn and Schweitzer (2005), in a series of experimental studies, found that when a truster had little history with a trustee, the truster's trust judgments were heavily influenced by the truster's own affective states. By contrast, when the truster was familiar with the trustee, the truster's affective states had little influence on his or her trust judgments.

We argue that the quality of LMX influences the strategies by which employees use their own affect in judging psychological safety before speaking up to leaders. Specifically, when LMX quality is high, employees already regard their interactions with leaders as mutually beneficial, trustful, and safe (e.g., Dulebohn et al., 2012; Liden et al., 1997). As a consequence, employees naturally feel psychologically safe in speaking up to their leaders without needing to consider their own affect in making safety evaluations. That is, employees

would use a direct strategy in this situation, and therefore, the effects of employees' own positive affect on psychological safety and, thus, on voice would be weak.

By contrast, when LMX quality is low, the work relationships between employees and leaders feature low levels of affective attachment, trust, and support (Cropanzano & Mitchell, 2005; Uhl-Bien & Maslyn, 2003). Employees encounter relatively risky and unpredictable situations when they interact with low-relationship-quality leaders, especially when judging whether the situation is safe for speaking up, and thus these employees are motivated to use auxiliary cues, such as their own affective states, to evaluate whether it is safe to voice. On the basis of these discussions, we propose a "first-stage" moderated mediation (Edwards & Lambert, 2007): The indirect effects of employees' positive affect on voice via their psychological safety are stronger when LMX quality is low rather than high.

Hypothesis 5: LMX quality moderates the indirect relationship between an employee's positive affect and upward voice (via the employee's psychological safety), such that this indirect relationship is stronger when LMX quality is low rather than high.

The EASI theory also proposes that people are more likely to monitor others' affective states to make social judgments when they have a low level of trust in others (Van Kleef et al., 2004, 2009). Under such a condition, an individual is motivated to expend effort to systematically process social information, such as emotions displayed by the interaction target, in order to make appropriate decisions, judgments, and behavioral strategies (Van Kleef et al., 2010). Recent research has suggested that a negotiator deliberately analyzes the negotiation partner's affect in order to develop effective strategies, especially when the two negotiators are competing rather than collaborating with each other (e.g., Van Kleef et al., 2004, 2010).

We argue that in the workplace, the quality of LMX influences the extent to which employees use leaders' affect when judging psychological safety. Specifically, when LMX quality is low, the interpersonal risks associated with voice are expected to be high (Burris et al., 2008; Van Dyne et al., 2008). That is, employees would tend to have greater concerns that their voice, however constructive, might be more negatively construed as a veiled criticism or complaint by a partner with whom they do not get along than by a partner with whom they have a positive relationship. Hence, when interacting with a leader with low LMX quality, employees might pay more attention to the leader's affect to discern whether the situation is favorable for speaking up. As a consequence, employees' assessments of leaders' positive affect would have a strong effect on psychological safety and, thus, on voice.

By contrast, when LMX quality is high, we expect employees to pay less attention to transient cues, such as the partner's affect, because their relationship is already based on trust and psychological safety (e.g., Dulebohn et al., 2012; Liden et al., 1997). Under such conditions, employees should care less about "reading the wind" when speaking up and, thus, are less influenced by their assessments of leaders' positive affect. Applying a similar logic, Liu, Tangirala, Lam, and colleagues (2015) proposed and found that in the context of teams, a target member's positive mood was positively related to a focal member's psychological safety with this target member, especially when the relationship quality between the two members was low rather than high. Based on the above discussions, we propose a "first-stage" moderated mediation model, where the effect of the assessment of leaders' positive affect on voice (via psychological safety perceptions) is stronger when LMX quality is low rather than high.

Hypothesis 6: LMX quality moderates the indirect relationship between an employee's assessment of the leader's positive affect and upward voice (via the

employee's psychological safety), such that this indirect relationship is stronger when LMX quality is low rather than high.

Role of Negative Affect

The above discussions have highlighted the role of positive affect during leader-member interactions, but prior research have also suggested that negative affect may play an important role in the context of voice (e.g., Edwards, Ashkanasy, & Gardner, 2009; Harvey et al., 2009; Kish-Gephart et al., 2009; Milliken et al., 2003). For example, in their qualitative interviews with employees, Milliken et al. (2003) reported that employees usually fear speaking up to their managers. Kish-Gephart et al. (2009) further theoretically elaborated the origin of fears associated with voice and suggested that such fears arise from deeply rooted emotions that are evolutionary based and further reinforced by socialization and habituation. Harvey et al. (2009) and Edwards et al. (2009), from the perspective of the observers of wrong-doing, theorized that experiences of anger and resentment may drive employees to blow the whistle in organizations. Therefore, it is meaningful to discuss how leaders' negative affect may influence employee voice.

First, we propose that leaders' negative affect may be contagious to employees; that is, employees tend to experience negative affect when their leaders display negative affect. Previous research has found that negative affective states, such as stress and burnout, can be transferred among friends, couples, and colleagues (e.g., Gump & Kulik, 1997; Van Kleef et al., 2009; Westman, Vinokur, Hamilton, & Roziner, 2004). However, the effect of employees' negative affect on psychological safety or voice may be not as clear as that of positive affect. One important reason is that the meanings of negative affect are more diversified and differentiated than those of positive affect (de Rivera et al., 1989; Ellsworth & Smith, 1988; Fredrickson, 1998). An employee who is experiencing fear, for example, may not dare to speak up (Kish-Gephart et al., 2009; Milliken et al., 2003), while an employee

who is experiencing anger, another type of negative affect, may take the risk to stick out and speak up (e.g., Edwards et al., 2009; Harvey et al., 2009).

Second, we also contend that when leaders display negative affect, employees are likely to recognize and assess the negative affect of leaders. However, the effect of employees' assessments of leaders' negative affect on psychological safety or voice may be not as clear as that of the assessments of leaders' positive affect. When an employee perceives that a leader is angry, for example, the leader's anger may trigger unsafe feelings within the employee, thus preventing voice (Milliken et al., 2003); but such anger may also signal the leader's dissatisfaction with the status quo, thus prompting the employee to speak up (Van Kleef et al., 2009).

In summary, the states comprising negative affect are more differentiated than those comprising positive affect. In addition, some negative affect may have opposite effects on psychological safety and voice, and we are lack of concrete research or theory in making precise predictions. As a result, in this study we chose to explore how leaders' negative affect may influence employee voice in an open manner, rather than proposing specific hypotheses. We are interested in the following research questions:

Research question 1: In an interactional episode, do leader's negative affect states influence employee voice?

Research question 2: If the answer to RQ 1 is yes, then is such an effect explained by psychological safety via the emotional contagion mechanism (i.e., via the employee's negative affect)?

Research questions 3: If the answer to RQ 1 is yes, then is such an effect explained by psychological safety via the signaling mechanism (i.e., via the employee's assessment of leader's negative affect)?

Methods

Research sites

We collected data from five small- and medium-sized enterprises in the IT industry in China. We contacted a total of 45 middle-level managers and 135 employees to participate in the current study. To qualify for the study, leaders had to have at least three employees reporting directly to them. If those leaders directly supervised more than three subordinates, we randomly selected three of their employees to participate.

Procedures

All participants were invited to briefing sessions, in which the purpose, content, and procedures of the study were communicated. Participation was completely voluntary and confidentiality was assured. During the briefing, every participant was trained on a one-to-one basis on how to use the mobile survey system through which we collected interaction data (described in the next paragraph); toward the end of the briefings, they finished a baseline survey, which collected demographic information and information on control variables.

We used an *event-contingent* version of the experience sampling method (Wheeler & Reis, 1991) to collect interaction data from leaders and employees. That is, both a leader and an employee were asked to fill out mobile surveys only when an interaction that met our pre-established standard (i.e., an event) occurred (Wheeler & Reis, 1991). We employed the mobile survey technique (MST, Li & Townsend, 2008; Song et al., 2008) to trace leaders' and employees' immediate interaction experiences in real work settings. A mobile survey refers to survey research using electronic questionnaires based on a mobile platform. We used J2ME and WAP as two alternative ways to collect data (Li & Townsend, 2008). Specifically, J2ME provides a robust, flexible environment for applications running on nearly all types of mobile devices (including low-end cell phones), such as electronic questionnaires, while WAP is a standardized protocol that enables mobile devices (smart or PDA phones) to access

web-based information. Combining these two methods, most mobile devices on the market can be “equipped” as data-collection tools. To conduct the mobile survey, we programmed electronic questionnaires based on J2ME and WAP and guided participants on how to complete these questionnaires through their mobile phones during briefing sessions. One day before the formal data collection, we also ran a simulation session to make sure that participants understood the protocol and could correctly submit their mobile surveys through the system.

For a period of 10 working days over two weeks’ time (including extra working hours), participants were required to respond to the mobile survey within one hour after each interaction with their leaders or employees (c.f., Bolger et al., 2003; Laurenceau, Feldman, & Pietromonaco, 1998). We specifically defined “interaction” in our study as a “face-to-face conversation between leaders and their immediate employees”¹ that lasts for more than two minutes. If participants were answering a J2ME-based questionnaire, their responses were sent back to researchers via short message service (SMS); if participants were answering a WAP-based questionnaire, their responses were submitted through mobile network (e.g., GPRS and 3G) to an online database. J2ME- and WAP-based questionnaires had similar formats, which allowed us to combine the data later for analysis. Responses were time-stamped, allowing for accurate recording of the time that the responses were received. We then matched responses from leaders and employees regarding the same interaction event.

To facilitate data collection and increase the response rate, we sent two types of SMS reminders to participants. The first type was a “general reminder,” which was sent out to every participant at 9:00 a.m. (the normal beginning of working hours in the morning) and 1:30 p.m. (the normal beginning of working hours in the afternoon) on each working day. A sample message is, “Good morning (afternoon), please do not forget to answer the survey

¹ The interaction, as defined in this study, excludes non-face-to-face communication via phones, e-mails, teleconferences, or others. It also excludes interactions that members had with leaders other than their direct leaders.

after interacting with your supervisor (employee). Thank you and have a pleasant day!” The second type was a “conditional reminder,” which was triggered when a leader (or an employee) submitted a mobile survey but the employee (leader) did not. Two research assistants monitored the system from 8:30 a.m. to 9:30 p.m. on each working day. They checked the system every 30 minutes and sent “conditional reminders” to corresponding participants once responses from either a leader or an employee showed up in the system. A sample message is, “Hi, please do not forget to submit your response for the interaction you just had with your supervisor (employee).” In addition to SMS reminders, participants also were encouraged to contact researchers via e-mail and telephone for instructions and help.

Since participants were the ones who initiated the mobile surveys, we provided cash and lotteries as incentives to motivate them to report each real interaction. In particular, for each pair of valid mobile survey responses, a leader and an employee each received 10 RMB (approximately 1.58 U.S. dollars). No upper limit was placed on the number of mobile survey responses. At the end of the study, leaders and employees were entered into a random drawing in which they had a chance to win an iPod-touch player as a reward. Participants also completed a short reflection survey at the end of the whole study.

Final sample

Among the 45 leaders and 135 employees, 9 leaders (20%) decided to drop out in the middle of data collection for reasons such as fatigue or busy work; accordingly, 27 employees who reported to these 9 leaders were dropped due to unmatched data. The remaining 36 leaders and 109 employees submitted a total of 1,849 mobile surveys, and 1,468 (79%) from 36 leaders and 96 employees were successfully matched (i.e., 734 episodes with paired surveys). We further cleaned the paired mobile survey data by deleting (a) 87 episodes with surveys submitted more than one hour after the interaction took place in order to reduce retrospection bias (e.g., Ilies et al., 2007; Laurenceau et al., 1998), and (b) 7

episodes with missing data on core variables. After the data cleaning, 640 paired responses from 36 leaders (80%) and 85 employees (63%) remained, resulting in an average of 7.53 paired responses per dyad.²

In the reflection survey, we asked leaders and employees to provide their estimation of how many interactions they had every day over the past two weeks. Then, we estimated the response rate as the actual number of interactions of each dyad received divided by the average of leaders' and employees' self-reported numbers of interactions. Overall, the mobile survey captured about 30% of the total number of interactions that had taken place during the data-collection period.

In the final sample, 22.8% of the leaders were female; their ages ranged from 23 to 47, with an average of 32.5; 88.6% had received college education or above; and their average organizational tenure was 49 months. For the employees, 51.8% were female; their ages ranged from 19 to 38, with an average of 28.2; 81.5% had received college education or above; and their average organizational tenure was 25.4 months. On average, leaders and employees submitted the mobile survey 32 minutes after the interaction, and an employee (or leader) responded to the mobile survey 22 minutes after the other party submitted the response. In addition, 15% of participants responded through the J2ME questionnaire and 85% responded through the WAP questionnaire. T-tests showed that there were no significant differences between the data collected by J2ME- and by WAP-based questionnaires.

Measurement

Positive affect. Leaders reported their positive affect in the mobile surveys, rating the extent to which they displayed specific types of affective states during their interactions with

² T-tests confirmed that employees who were eliminated did not differ significantly from those in the final sample along demographic dimensions or LMX ($t = 1.72, p > .05$). Moreover, although the eliminated paired mobile surveys had significantly lower scores on leader positive affect ($t = 7.61, p < .001$), employee positive affect ($t = 8.52, p < .001$), employee perceived leader's positive affect ($t = 8.15, p < .001$), psychological safety ($t = 4.75, p < .001$), and voice ($t = 3.73, p < .001$) than did those in the final sample, including these data in the regressions did not substantially change results. To ensure data quality, we decided not to include them in the final analyses.

employees on a five-point scale (from 1 = “to a small extent” to 5 = “to a large extent”). As participants needed to report every interaction they had, a lengthy survey would have been demanding. For this reason, we used four items (delighted, excited, happy, and joyful) that reflected both positive valence and high activation from the positive affect scale of Tellegen, Watson, and Clark (1999) to represent leaders’ positive affect ($\alpha = .93$).

Employees reported their positive affect in mobile surveys, rating the extent to which they experienced specific types of affective states during each interaction with leaders on the same four-item five-point scale ($\alpha = .95$). Employees also reported their assessments of their leaders’ positive affect in the mobile surveys, rating the extent to which they perceived leaders displaying specific types of affect during the interaction on the same four-item five-point scale ($\alpha = .95$).

Negative affect. Leaders reported their negative affective states in the mobile surveys, rating the extent to which they displayed specific types of states (distressed, angry, sad, and afraid)—four items from Tellegen et al.’s negative affect scale (1999, $\alpha = .78$), during each interaction with employees on a five-point scale (from 1 = “to a small extent” to 5 = “to a large extent”).

Employees reported their negative affect in the mobile surveys, rating the extent to which they experienced specific types of affect during each interaction with leaders on the same four-item five-point scale ($\alpha = .83$). Employees also reported the extent to which they perceived leaders’ negative affect during the interaction (1 = “to a small extent” to 5 = “to a large extent”), using the same scale ($\alpha = .87$).

Employees’ psychological safety. Employees reported the extent of their psychological safety during each interaction with leaders in the mobile survey using three positively described items adapted from the scale proposed by Liang et al. (2012). A sample

item was: “In the interaction with the leader just now, I feel that expressing my true opinions is welcomed by this leader” (from 1 = “strongly disagree” to 5 = “strongly agree,” $\alpha = .90$).

Employees’ upward voice. Leaders reported employees’ upward voice during the interaction in the mobile survey. Following Morrison’s (2011) suggestion, we selected three items from Van Dyne and LePine (1998) and from Liang et al.’s (2012) voice scale by focusing on suggestion, opinion, and concern, respectively. Sample items were: “In the interaction with me just now, this employee (1) gave me constructive suggestions regarding work-related issues, (2) expressed his/her opinions to me, which are different from mine, and, (3) pointed out problems in our work or company” (from 1 = “strongly disagree” to 5 = “strongly agree,” $\alpha = .79$).

Leader-member exchange quality. Employees reported LMX quality in the baseline survey using the seven-item leader-member exchange scale suggested by Graen and Uhl-Bien (1995). A sample question was: “How would you characterize your working relationship with your leader?” (1 = “extremely ineffective” to 5 = “extremely effective,” $\alpha = .85$).

Control variables. To exclude alternative explanations, we controlled variables that could be related to voice and affective experience. First, interaction quality may influence both leaders’ and employees’ affect, so we created a 3-item scale and had leaders report the interaction quality of each episode. A sample item was: “This interaction was effective” (from 1 = “strongly disagree” to 5 = “strongly agree,” $\alpha = .92$). Second, as employees may be more likely to engage proactive behaviors when they show initiative (Frese & Fay, 2001), we controlled who initiated the interaction in each episode (the leader, the employee, or a third party). We used two dummy variables to code these three choices (“initiated by the leader,” 1 = “yes,” 0 = “no”; “initiated by the employee,” 1 = “yes,” 0 = “no”).

Third, we controlled for dyadic tenure (month) between leaders and employees and also the estimated the interaction time with the leader during the survey period, which

employees reported at the end of our study, because we wanted to exclude the possibility that employees spoke up to their leaders merely due to having had more opportunities to approach their leaders during the survey period. Fourth, employees' proactive personality (e.g., Detert & Burris, 2007) and employees' positive affectivity and negative affectivity (e.g., Grant, Parker, & Collins, 2009; Tangirala & Ramanujam, 2008) have been identified as personality factors associated with voice and affective states, so we used Seibert, Crant, and Kraimer's (1999) 10-item proactive personality scale to measure proactive personality (from 1 = "strongly disagree" to 5 = "strongly agree," $\alpha = .79$) and Watson, Clark, and Tellegen's (1988) 20-item affectivity scale (from 1 = "to a small extent" to 5 = "to a large extent") to measure positive ($\alpha = .86$) and negative ($\alpha = .87$) affectivity. Further, research has shown that individual differences in susceptibility to emotional contagion influence affective transfer in the workplace (Ilies, Wagner, & Morgeson, 2007), so we measured this variable using Doherty's (1997) emotional contagion scale (from 1 = "strongly disagree" to 5 = "strongly agree," $\alpha = .78$). In addition, individuals differ in their ability to recognize others' emotions (cf., Mayer, Roberts, & Barsade, 2008). Hence, we controlled for employees' emotional appraisal ability using Wong and Law's (2002) sub-scale of emotional intelligence.

Finally, as transformational leadership style may influence employees' emotional experience (Bono, Foldes, Vinson, & Muros, 2007) and voice (Detert & Burris, 2007), we asked each employee to report the extent of their leader's transformational leadership using the scale from MLQ 5X (Avolio, Bass, & Jung, 1999, $\alpha = .96$). Statistical tests revealed that it was appropriate to aggregate this scale to the leader level (the median of $R_{wg} = .95$, $ICC[1] = .20$, $ICC[2] = .42$, $F(1, 35) = 1.73$, $p < .05$), so we conducted aggregation and used it as a leader-level variable in our analyses. Moreover, as leaders' positive and negative affectivity may also influence leaders' affective states and employees' perceptions (Rubin, Munz, &

Bommer, 2005), we asked leaders to report positive and negative affectivity using Watson et al.'s (1988) positive ($\alpha = .70$) and negative ($\alpha = .87$) affectivity scale.

Analytic Strategy

We first conducted confirmatory factor analyses (CFA) to confirm the discriminant validity of our measures. Next, we checked variances of episode-level variables (e.g., voice and psychological safety) with HLM 6.02 (Raudenbush, Bryk, Cheong, & Congdon, 2004) to confirm that hierarchical linear models would be appropriate to analyze our data. Then to partition the variance at the episode, employee, and leader levels in hypothesis testing, we used HLM 6.02 to test our hypotheses. We centered episode-level predictors with the group-mean technique due to our research interests, as well as to separate the cross-level interactions from the between-group interactions when testing the cross-level interactive effects (Aguinis, Gottfredson, & Culpepper, 2013; Hofmann & Gavin, 1998). We centered employee- and leader-level predictors with the grand-mean technique to reduce potential collinearity between level-2 intercept and slope terms and to model the potential influences of both within- and between-team variances (Hofmann & Gavin, 1998; Mathieu & Taylor, 2007). When testing the hypothesized multilevel mediated relationships, we used the Monte Carlo method recommended by Selig and Preacher (2008) and Preacher, Zyphur, and Zhang (2010) to estimate confidence intervals for determining their significance, with the help of an open-source software R-based simulator (which can be found at <http://www.quantpsy.org>).

Results

Descriptive Statistics and Confirmatory Factor Analyses

Table 1 shows the means, standard deviations, and correlations of the variables. We conducted CFAs on eight focal variables (leader's positive affect, employee's positive affect, employee's assessment of leader's positive affect, leader's negative affect, employee's negative affect, employee's assessment of leader's negative affect, psychological safety, and

voice) and one critical control variable (interaction quality) at the episode level. The nine-factor model fit the data well ($\chi^2 = 1490.28$, $\chi^2/df = 3.25$, RMSEA = .06, non-normed fit index (NNFI) = .93, comparative fit index (CFI) = .94). This model fit the data better than alternative models when the following variables were combined: (a) leader's positive affect and employee's positive affect ($\Delta\chi^2 \Delta(8) = 2133.85$, $p < .01$); (b) leader's positive affect and employee's assessment of leader's positive affect ($\Delta\chi^2 \Delta(8) = 2147.72$, $p < .01$); (c) employee's positive affect and employee's assessment of leader's positive affect ($\Delta\chi^2 \Delta(8) = 748.07$, $p < .01$); (d) leader's negative affect and employee's negative affect ($\Delta\chi^2 \Delta(8) = 833.83$, $p < .01$); (e) leader's negative affect and employee's assessment of leader's negative affect ($\Delta\chi^2 \Delta(8) = 824.37$, $p < .01$); (f) employee's negative affect and employee's assessment of leader's negative affect ($\Delta\chi^2 \Delta(8) = 801.42$, $p < .01$); (g) psychological safety and voice ($\Delta\chi^2 \Delta(8) = 727.05$, $p < .01$); (h) leader's positive affect, voice, and interaction quality ($\Delta\chi^2 \Delta(15) = 1783.82$, $p < .01$); and (i) all nine variables as a single factor ($\Delta\chi^2 \Delta(36) = 9639.12$, $p < .01$). The results indicated discriminant validity for these variables.

Partitioning of Variance

To check if the theoretical reason for using HLM (i.e., variance at episode and employee levels) was justified empirically, we inspected the results of null models in HLM (regressions without any predictors) for the eight core episode-level variables. Null models separated the variance in these variables into episode, employee, and leader levels, and the intercept represents the mean of the variable. The three-level HLM is justified only when variances in the outcome variables are present at different levels. Table 2 shows the results for each null model. First, these variables all had significant episode-level variances, ranging from 31.3% to 69.9% (leader's positive affect, 46.7%; employee's positive affect, 31.3%; employee's assessment of leader's positive affect, 42.4%; leader's negative affect, 53.2%; employee's negative affect, 48.2%; employee's assessment of leader's negative affect, 69.9%;

psychological safety, 50.6%; and upward voice, 61.6%). In addition, except for leader's negative affect, all variables had significant employee-level variances, ranging from 7.8% to 67.8% (leader's positive affect, 7.8%; employee's positive affect, 67.8%; employee's assessment of leader's positive emotion affect, 51.2%; employee's negative affect, 51.7%; employee's assessment of leader's negative affect, 30.1%; psychological safety, 37.2%; and upward voice, 7.8%). Finally, four variables also had significant leader-level variance (leader's positive affect, 45.4%; leader's negative affect, 46.8%; psychological safety, 12.3%; and upward voice, 30.6%). Therefore, these results indicate that HLM was a more appropriate analytic technique than standard OLS (LeBreton & Senter, 2008).

Hypothesis Testing

Table 3 presents the results of our HLM analysis. Hypothesis 1 predicted that employee's positive affect would mediate the positive relationship between leader's positive affect and employee psychological safety. As shown by the results in *Table 3, Model 1*, leader's positive affect was positively related to employee's positive affect ($\gamma = .26, p < .01$). In addition, the employee's positive affect was positively related to employee psychological safety even when the leader's positive affect was controlled ($\gamma = .23, p < .01$; *Table 3, Model 6*). To further confirm this mediation, we used a Monte Carlo-based simulation methodology (20,000 repetitions), which is similar to parametric bootstrapping, as suggested by Selig and Preacher (2008). Results indicated that the indirect path from leader's positive affect to employee psychological safety via employee's positive affect was significant (.06; 95% CI [03, .09]). Hence, Hypothesis 1 was supported.

Hypothesis 2 predicts that an employee's positive affect and psychological safety would sequentially mediate the positive relationship between leader's positive affect and employee's upward voice. As shown by the results in *Table 3, Model 9*, employee psychological safety was positively related to employee's upward voice ($\gamma = .11, p < .01$).

Based on this coefficient and the results in testing Hypothesis 1, we used the same Monte Carlo-based simulation methodology (20,000 repetitions) and found that the indirect path for leader's positive affect → employee's positive affect → psychological safety → voice was significant and positive (.0077; 95% CI [.00040, .0151]). Therefore, Hypothesis 2 was supported. Although the point estimates (.0077) for this indirect effect look small, Preacher and Kelley (2011) suggested that the estimates of indirect effects are determined by the range of possible values of each link in the mediation process and are very likely to differ from the population parameters. Therefore, the indirect effect still provides meaningful and important support to our hypothesis about the mediation relationships between variables.

Hypothesis 3 predicted that the employee's assessment of the leader's positive affect would mediate the positive relationship between the leader's positive affect and the employee's psychological safety. As shown by the results in *Table 3, Model 2*, the leader's positive affect was positively related to the employee's assessment of the leader's positive affect ($\gamma = .31, p < .01$). The employee's assessment of the leader's positive affect, however, was not significantly related to employee psychological safety ($\gamma = .07, n.s., Table 3, Model 6$). Hence, Hypothesis 3 was not supported. As a result, we did not further test Hypothesis 4, which predicted that an employee's assessment of the leader's positive affect and employee psychological safety would sequentially mediate the positive relationship between the leader's positive affect and the employee's upward voice.

Hypothesis 5 predicted that LMX would moderate the relationship between the employee's positive affect and his or her psychological safety. As shown in *Table 3, Model 7*, the interaction term was significant ($\gamma = -.18, p < .05$). With the comparison of a raw random-slope model without any slope predictors, LMX explained 7% of the variance of the slope. Following Aiken and West (1991), we present this interaction graphically at two levels of LMX (i.e., +1 SD and -1 SD) in Figure 2a. A simple slopes test indicated that employee's

positive affect was positively related to employee psychological safety at lower levels of LMX ($\gamma = .28, t = 3.78, p < .01$), but not significantly related to it at higher levels of LMX ($\gamma = .07, t = .95, n.s.$); and the two simple slopes were significantly different from each other ($t = 2.02, p < .05$). We also examined indirect paths using the Monte Carlo-based simulation methodology (20,000 repetitions). When LMX was low, the indirect path from employee's positive affect to upward voice via psychological safety was significant and positive (.036; 95% CI [.0013, .070]), which was significantly stronger than the indirect path when LMX was high (.011, 95% CI [-.0083, .031], $t = 1.98, p < .05$). Therefore, Hypothesis 5 was supported.

Hypothesis 6 predicted that LMX moderates the relationship between the employee's assessment of the leader's positive affect and employee psychological safety. As shown in *Table 3, Model 6*, the interaction term was significant ($\gamma = -.20, p < .05$). With the comparison of a raw random-slope model without any slope predictors, LMX explained 15% of the variance of the slope. This interaction at two levels of LMX (i.e., +1 SD and -1 SD; Aiken & West, 1991) is presented graphically in Figure 2b. A simple slopes test indicated that the perceived positive affect of leaders was positively related to employee psychological safety at lower levels of LMX ($\gamma = .20, t = 2.36, p < .05$), but it was not significantly related to it at higher levels of LMX ($\gamma = -.04, t = -.44, n.s.$), and the two simple slopes were significantly different from each other ($t = 2.12, p < .05$). We also examined indirect paths using the Monte Carlo-based simulation methodology (20,000 repetitions). When LMX was low, the indirect path from the employee's assessment of the leader's positive affect to upward voice via psychological safety was significant and positive (.029; 95% CI [.0002, .0571]), which was significantly stronger than the indirect path when LMX was high (-.0054, 95% CI [-.0264, .0156], $t = 2.01, p < .05$). Therefore, Hypothesis 6 was supported.

We were also interested in examining the role of negative affect in the context of voice. To address our first research question regarding whether a leader's negative affect influences employee voice, *Model 9* in *Table 3* showed that the leader's negative affect was positively and significantly related to voice ($\gamma = .30, t = 3.61, p < .01$). Our second and third research questions concerned the mechanisms by which a leader's negative affect influences voice. *Model 3* in *Table 3* showed that the leader's negative affect was positively and significantly related to the employee's negative affect ($\gamma = .13, t = 3.24, p < .01$), which, however, was not significantly related to psychological safety (*Model 6* in *Table 3*, $\gamma = -.01$, n.s.) or voice (*Model 9* in *Table 3*, $\gamma = .02$, n.s.). In addition, *Model 4* in *Table 3* showed that a leader's negative affect was positively and significantly related to the employee's assessment of the leader's negative affect ($\gamma = .19, t = 3.53, p < .01$), which, however, was not significantly related to psychological safety (*Model 6* in *Table 3*, $\gamma = .03$, n.s.) or voice (*Model 9* in *Table 3*, $\gamma = .05$, n.s.).³

We also investigated whether LMX quality might moderate the effects of an employee's negative affect and of an employee's assessment of leader's negative affect on psychological safety. The slope-as-random HLM models, however, showed that there was not significant variance for either the relationship between employee's negative affect and psychological safety or the relationship between employee's assessment of leader's negative affect and psychological safety. Therefore, we did not further explore.

Discussions

In this study, we have highlighted the important role of leaders' affect in the process of employees' upward voice during leader-member interactions. Using the emotion-as-social-

³ We also conducted supplementary analyses by separately examining each negative affect item (i.e., distressed, angry, sad, and afraid). We found that (1) except for afraid, leader's single negative state was positively related to employee's single negative state (contagion effect), (2) except for distressed, leader's single negative state was positively related to employee's assessment to leader's single negative state (signaling effect); (3) we did find that employees who were afraid were less likely to engage in voice, though this relationship was marginal ($p < .10$); and (4) employee's assessment of leader's distressed was positively but marginally ($p < .10$) related to voice.

information model (Van Kleef et al., 2010) as our theoretical lens, we conceptualized and examined voice as a dynamic interaction between leaders and employees. Our findings suggest that leaders' positive affect influences voice through psychological safety directly via employees' own positive affect (emotional contagion pathway) but not directly via employees' assessments of leaders' positive affect (signaling pathway). Moreover, we found that employees' own positive affect and their assessments of leaders' positive affect were related to employees' upward voice via employees' psychological safety only when LMX was low rather than high. Interestingly, leaders' negative affect was also positively related with voice; although leaders' negative affect was related to employees' negative affect (emotional contagion pathway) and employees' assessments of leaders' negative affect (signaling pathway), none of which were significantly related to psychological safety or voice. The findings of our study generate some interesting implications for theory and practice.

Theoretical Implications

Our findings contribute to the voice, affect, and leadership literatures in several important ways. First, this study unveils upward voice as a dynamic behavior with episodic variance. Most previous studies have investigated voice at the individual or group level and thus only focused on relatively stable personal, relational, or situational predictors of voice (Morrison, 2011, 2014). Although some scholars have discussed the episodic characteristics of voice (e.g., Detert & Edmondson, 2011; Detert & Treviño, 2010), little effort has been made to investigate voice empirically at the episode level. Our data showed that 61.6% of the variance of upward voice occurred at the episode level, which indicates that it is meaningful and important to examine voice as an episodic behavior in organizations. Our finding, together with recent research suggesting substantial within-individual variance in work behaviors (e.g., Dalal, Lam, Weiss, Welch, & Hulin, 2009; Ilies, Scott, & Judge, 2006),

demonstrates that taking an episodic approach to examine organizational behavior can be fruitful and beneficial (Beal, Weiss, Barros, & MacDermid, 2005).

Second, this research enhances our understanding of the role of leaders' affective states in affecting employee voice. Past qualitative research and conceptual discussions have focused mainly how an individual's *own* affect is associated with his or her voice (Edwards, Ashkanasy, & Gardner, 2009; Harvey et al., 2009; Kish-Gephart et al., 2009; Milliken et al., 2003). However, the effects of others' emotions, such as leaders' positive affect, have remained unknown. We have addressed this important research question by conducting a multilevel, experience sampling field study to provide empirical evidence of the effects of leaders' affect on employee voice. Our study not only provides empirical evidence of "reading the wind" (Dutton et al., 1997), but also responds to scholars' calls for a fine-tuned framework to explore the connection between affect and voice (Grant & Ashford, 2008; Morrison, 2011). Using three-level hierarchical data, we have demonstrated that leaders' positive and negative affective states have unique, independent effects on employee voice. Hence, our research also adds to the leadership literature showing that leaders' affect plays a crucial role in influencing employees' attitudes and behaviors (Gooty et al., 2010). This contribution is important because the extant literature has focused primarily on attitudinal outcomes or in-role performance as consequences of leaders' affect.

A third theoretical contribution of this research is that it integrates emotional contagion and signaling mechanisms with psychological safety to explain why leaders' positive affect influences voice. Although recent years have witnessed increasing interest in exploring the effects of leaders' affect, studies of the explanatory mechanisms have been very limited (Madera & Smith, 2009). Introducing the EASI model to voice research, we have investigated whether the emotional contagion or signaling mechanisms can explain the effects of leaders' positive affect on employees' psychological safety and in turn, employees'

voice. Employees' positive affect was found to account for the positive effects of leaders' positive affect on psychological safety and, thus, on voice. This finding supports emotional contagion theory (Hatfield et al., 1994) and also sheds light on the EASI literature (Van Kleef et al., 2010), in that psychological safety may provide another mechanism explaining why leaders' affect influences employees. Interestingly, by contrast, employees' assessments of leaders' positive affect was not significantly related to psychological safety or voice. This finding suggests that the signaling mechanism is probably more complicated than the emotional contagion process (Van Kleef et al., 2010) because whether the assessments of leaders' positive affect lead to psychological safety or voice depends on contextual factors, such as LMX.

Fourth, our study extends the EASI model and the LMX literature by theorizing the moderating role of LMX in attenuating the effects of leaders' affect. With a primary focus on conflict resolution contexts, prior EASI research has found that personal traits, such as agreeableness (Van Kleef, Homan, Beersma, & van Knippenberg, 2010) and need for closure (Van Kleef et al., 2009), and relational characteristics, such as power difference (Van Kleef et al., 2004), are the boundary conditions for the social functions of emotions. Applying the EASI model to leader-member interaction contexts, our study has indicated that LMX quality moderates both emotional contagion and the signaling process. That is, employees who have low rather than high LMX quality are more likely to be influenced by leaders' affect—both being more susceptible to leaders' affect and being more motivated to cognitively analyze leaders' affect in formulating psychological safety in interactions with leaders. Therefore, our findings suggest that in the workplace, LMX quality plays an important role in influencing people's reactions to affect as social information during interactions (Dunn & Schweitzer, 2005), an outcome that extends EASI research.

This research also adds to the existing LMX literature (Dulebohn et al., 2012), which has not addressed the potential role of LMX in the effects of leaders' affect. This is partially because past LMX research has rarely taken a within-individual approach to examine leader-member interaction dynamics, thus neglecting LMX as an important contingent contextual factor that influences interaction episodes. Directly addressing this research gap, we combined experience sampling data (mobile survey) and LMX data (baseline survey) in our study. Besides the moderating role of LMX, we also observed that LMX did not have a significant effect on voice (*Model 9, Table 3, $\gamma = .01$, n.s.*), a finding contradictory to previous voice research at the individual level (e.g., Burris et al., 2008; Liu, Tangirala, & Ramanujam, 2013; Van Dyne et al., 2008). We surmise that this is probably because we collected data for only a relatively short period (10 working days), such that momentary characteristics, such as leaders' affective states, are more salient predictors than stable predictors, such as LMX.

Finally, with parallel data of both positive affect (leader's positive affect, employee's positive affect, and employee's assessment of leader's positive affect) and negative affect (leader's negative affect, employee's negative affect, and employee's assessment of leader's negative affect), our study showed some similar as well as different patterns for these two types of affective states. For example, interestingly, like leader's positive affect, leader's negative affect was positively related with employee voice. Moreover, we found that similar to leaders' positive affect, leaders' negative affect was transferred to employees, who could also assess them cognitively. These findings suggest that like positive affect, negative affect also serves important social functions (e.g., Lelieveld, Van Dijk, Van Beest, Steinel, & Van Kleef, 2011; Madera & Smith, 2009) and that emotional contagion and signaling are the two possible influential processes (e.g., Eberly & Fong, 2013; Van Kleef et al., 2009).

Unlike positive affect, however, neither employee's overall negative affect nor employee's assessment of leader's overall negative affect had any significant effects on psychological safety or voice. Nevertheless, it is too early to conclude that negative affect do not predict voice. There are several possible explanations for our non-findings. From a methodological perspective, these non-findings might be due to the relatively few negative interactions in our sample. For example, compared with employee's positive affect and employee's assessment of leader's positive affect ($M_s = 3.66/3.66$, $SD = 1.01/.99$), employee's negative affect and employee's assessment of leader's negative affect ($M_s = 1.23/1.23$, $SD = .48/.53$) were more restricted in range. From a theoretical perspective, these non-findings suggest that the social functions of negative affect may be more differentiated than those of positive affect. Previous research has shown that compared with positive emotions, negative emotions have more dimensions and are richer in their meanings (e.g., de Rivera et al., 1989; Ellsworth & Smith, 1988; Fredrickson, 1998). Moreover, some negative emotions, such as fear, deactivate one's willingness to speak up (Kish-Gephart et al., 2009) because these emotions represent warning, threat, or punishment (Elfenbein, 2007; Larsen & Ketelaar, 1991). In our supplementary analyses, we did find that employees' feeling of being afraid was negatively (but marginally) related to voice. By contrast, some other negative emotions, such as angry and distressed, suggest something is wrong and change is needed (e.g., e.g., Edwards et al., 2009; Harvey et al., 2009). In our supplementary analyses, we did find that employee's assessment of leader's distress was positively (but marginally) related to voice. Of course, these initial findings were limited because they were based on the single-item measure of each type of negative affect. Therefore, it is critical to investigate discrete negative emotions, such as anger, disappointment, and sadness, with more sophisticated methods in the future (e.g., Lelieveld et al., 2011; Van Kleef et al., 2010).

Managerial Implications

Our study has significant implications for managerial practices. We have shown that leaders' positive affect promotes employee psychological safety and, thus, voice. This result can serve as advice to organizations that managers should display positive affect when interacting with their subordinates. Managers' affect, something they can control but often neglect in their interactions with employees, can be an effective management tool influencing employees (Huy, 2002). In organizations where employees' suggestions, opinions, and concerns have critical implications for organizational functions, managers should pay more attention to their display of positive affect in everyday contacts with employees, because showing positive affect to employees can increase employees' psychological safety in freely expressing their ideas (Edmondson, 2003). In addition, organizations should implement training programs to teach management how to express positive affect to employees. Our results showed that both leaders' positive affect and employees' assessments of leaders' positive affect fluctuated with a large magnitude. Hence, organizations should invest in training programs to help management develop more positive attitudes toward work, as well as better interpersonal skills. Furthermore, to encourage employees to speak up, managers should consider exercising transformational leadership, which has been suggested to promote employees' positive affect (Bono et al., 2007) and voice (Detert & Burris, 2007). Moreover, our finding about the emotional contagion route also suggests that managers should consider having more face-to-face interactions with employees. Individuals are likely to experience similar emotions when they are exposed to emotionally laden faces, bodies, and voices (Hatfield et al., 1993). Therefore, having more positive physical (rather than virtual) interactions would be more likely to encourage employees to speak up.

Another implication of our research relates directly to LMX in leader-member interaction dynamics. Our findings showed that leaders' positive affect play a salient role in eliciting psychological safety and voice, especially for employees who have low LMX with

leaders. This suggests that employees with low LMX are more likely to be the wind-readers (Ashford et al., 1998) and that subtle cues signaled by management, such as positive affect, significantly shape their attitudes and behaviors. Accordingly, when interacting with employees in whom LMX is low, managers should be more careful about their display of affective states. Organizations should share this finding with newly appointed leaders who have not yet established high LMX with organization members (Bauer & Green, 1996), who especially need employees to speak up in order to collect constructive ideas and bring changes to the new environment (Morrison & Milliken, 2000; Sauer, 2011).

Limitations and Directions for Future Research

Our study has several limitations that point to directions for future research. First, our research focused on leaders' high-activated positive affect (i.e., delighted, excited, happy, and joyful) and high-activated negative affect (distressed, angry, sad, and afraid). A valuable extension to our research would be to examine discrete emotions (e.g., excitement) rather than high-activated positive affect in general. Van Kleef and colleagues (2010) have emphasized that discrete emotions can give more accurate meanings to partners in social interactions. A less activated positive emotion, for example, might signal the target's satisfaction with the status quo (Bindl, Parker, Totterdell, & Hagger-Johnson, 2012), and therefore its positive effect on the actor's change-oriented behaviors, including voice, might not be as prominent. Existing research, however, has suggested that compared with negative emotions, positive emotions are fewer in number and more diffuse (de Rivera et al., 1989; Ellsworth & Smith, 1988; Fredrickson, 1998). This may alleviate, to a certain degree, the concern that the findings obtained in our study cannot be generalized to other positive emotions. Future studies, especially those with a focus on negative emotions, should explore the effects of discrete emotions. An even more interesting and aggressive agenda would be to

examine and compare different emotions in the emotion circumplex (Russell, 1980) in the context of voice.

Second, in our study we only asked leaders to report employee voice, an observable behavior by others; we did not explore a related behavior, silence or information withholding (Morrison & Milliken, 2000; Tangirala & Ramanujam, 2008). As negative emotions may be more tied to silence rather to voice (Liu et al., 2015), future research should consider exploring such a direction. In addition, as only the employees themselves are probably aware of silence, future research should examine both voice and silence by taking into account multiple perspectives from the actor and the target and by objectively measuring these behaviors.

Third, although we drew upon the EASI model (Van Kleef et al., 2010) to theorize mediators (e.g., employees' positive affect [EPA], assessment of leaders' positive affect [ALPA], and psychological safety) and a contingent factor (LMX) for the relationship between leaders' positive emotions and voice in our research, future research should further investigate other possible mediating mechanisms and moderators. Interestingly, our data showed that leaders' positive affect (LPA), the distal predictor in our model, was significantly associated with voice, yet none of the more proximal employee predictors (EPA and ALPA) were significant (*Model 9, Table 3*). This finding may result from common method bias, as leaders reported their own positive affect as well as voice, but it may also suggest that besides emotional contagion (via EPA) and signaling (via ALPA) and psychological safety, there are other potential mediating mechanisms linking LPA and voice. LPA, for example, may energize employee to have a sense of power, which in turn may lead to voice (Tangirala & Ramanujam, 2012). Future research should explore other mechanisms.

Another cautious point is that we did not directly measure employee's strategic inferences of leaders' affective states for the signaling pathway, although we believe that

employees' assessment of leaders' affect should be the precondition for making strategic inferences (e.g., Elfenbein, 2007). In other words, an employee must first perceive and assess a leader's affect before making an inference about it. As such, future research should measure strategic inferences directly, as Van Kleef et al. (2010) suggested, to discern the functions of signaling mechanism in social interactions.

Fourth, given that participants reported all of our key variables after each interaction, our study could not firmly establish causality for the hypothesized relationships. Prior research and supplemental analyses, however, may help overcome this limitation. Existing emotion research, for example, has shown that the emotions of an individual with high power are more likely to (a) exert influence on, and (b) be transmitted to individuals with low power, rather than vice versa (Anderson et al., 2003; Van Kleef et al., 2004). Hence, in our study, leaders' affect is more likely to be the predictors of employees' positive affect and their assessment of leaders' positive affect. Moreover, to establish the causal relationship between leaders' positive emotions affect and voice, a core research interest in this study, we conducted supplemental lagged analyses with a subsample of participants who reported more than two episodes within a day. In support of our argument, the results showed that (a) leaders' positive affect led to employee voice but not vice versa; (b) leader's positive affect led to employee's assessment of leader's positive affect but not vice versa; and (c) employee's assessment of leader's positive affect led to psychological safety but not vice versa.⁴ Despite these theoretical arguments and analytic efforts, we still cannot firmly

⁴ We thank the Editor for providing this suggestion. Specifically, we selected paired mobile surveys submitted within the same day ($n = 322$) to conduct lagged analyses and obtained some meaningful findings. First, we found that employee voice in the previous episode did not lead to leaders' positive affect in the current episode ($\gamma = .05, n.s.$), when controlling leaders' positive affect in the previous episode. By contrast, leaders' positive affect in the previous episode did lead to employee voice in the current episode ($\gamma = .15, p < .05$), when controlling voice in the previous episode. Second, leader's positive affect in the previous episode was positively related with employee's assessment of leader's positive affect in the current episode ($\gamma = .20, p < .05$), even when controlling employee's assessment of leader's positive affect in the previous episode, but employee's assessment of leader's positive affect in the previous episode was not significantly related with leader's positive affect in the current episode ($\gamma = .03, n.s.$) when controlling leader's positive affect in the previous episode. Third, employee's assessment of leader's positive affect in the previous episode was positively related with

establish the causal links proposed in our study without an experimental design or pre- and post-interaction measures of affect using ESM. Future research should employ a more microscopic approach to fill in this gap.

Fifth, most of the measures in our study (i.e., EPA, ALPA, and psychological safety) were all from employees, which may raise questions about common method bias (i.e., inflation of relationships among study variables). The intra-individual level correlations, however, were not substantial (the correlations ranged from .05 to .59). In addition, as we used intra-individual analyses by centering the variable scores at the individuals' means, we thus sufficiently eliminated the potential response tendencies that stem from personal characteristics and experiences. Another possible source of common variance that causes concern in between-individual analyses, LMX quality, was conceptualized and analyzed as a moderator in this study and thus alleviated the concern about common method bias. Nevertheless, future research that overcomes the methodological limitations associated with this study (by using observations, for example) could provide more accurate assessments of the relationships of interest.

Sixth, although the mobile-survey method has the advantage of making it possible to conduct a survey anytime and anywhere (Li & Townsend, 2008), we were able to record only 30% of the interactions that took place. There were several possible reasons for this relatively low response rate. First, consistent with guidance for conducting an interactional study (Bolger et al., 2003), to avoid placing too much burden on participants, we asked our participants to only report interactions that last for more than two minutes. It is thus likely that our study neglected some short conversations or small talk. Second, participants might have been too busy with their work, and thus had no time to record their conversations in

psychological safety in the current episode ($\gamma = .09, p < .05$), even when controlling psychological safety in the previous episode, but psychological safety in the previous episode was not significantly related with employee's assessment of leader's positive affect in the current episode ($\gamma = -.05, n.s.$) when controlling employee's assessment of leader's positive affect in the previous episode.

time. Third, the survey could not be completed when participants did not bring their phones with them, when their phones had no power, or when they were in places with poor mobile network coverage. Lastly, our study asked participants to record only their face-to-face interactions, thus excluding interactions through electronic media, such as phone conversations, email, and SMS. Future studies are encouraged to examine hypothesized relationships in the above situations and to apply innovative methods to capture more dyadic interactions.

Another limitation of our study is that we did not measure leaders' behavior at the episode level, which may inflate the effects of leaders' affect. Although we did control transformational leadership at the leader level, we could not exclude the possibility that voice results from leaders' behavior rather than leaders' affect. Future research should measure leaders' episodic behavior to exclude such an alternative explanation.

Finally, our data were from China, a culture that features a highly collectivistic orientation and high power distance (House, Hanges, Javidan, Dorfman, & Gupta, 2004). So it is questionable whether our results could be extended to other cultures. As existing voice behavior research has involved mainly Western cultures (e.g., Detert & Burris, 2007; Van Dyne & LePine, 1998; Tangirala & Ramanujam, 2008), however, our research, supported by data from Mainland China, may bring fresh perspectives. Of course, future research should explore whether our findings can be replicated in other cultures.

Conclusion

Our study has highlighted the importance of leaders' affect as a critical factor that influences both employees' psychological safety and upward voice behavior. Our results also indicate that leaders' positive affect are more likely to influence employees who are low in LMX, through both employees' own positive affect and their assessments of leaders' positive affect. These findings indicate that leaders' emotions affect matter to upward voice and

suggest the importance of taking a dynamic, within-individual approach to study the connection between affect and voice.

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TABLE 1
Means, Standard Deviations, and Correlations

Level 1 Variables^a

Variables ^b	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11
1. Initiation by Leader	.55	.50											
2. Initiation by Employee	.35	.48	-.82**										
3. Interaction Quality	4.28	.73	-.03	.08*	(.92)								
4. LPA	3.63	.86	.04	-.06	.23**	(.93)							
5. EPA	3.65	1.01	.00	.03	.17**	.29**	(.95)						
6. ALPA	3.66	.99	.04	-.06	.05	.28**	.59**	(.95)					
7. LNA	1.25	.43	-.01	.00	-.16**	-.26**	-.14**	-.09*	(.78)				
8. ENA	1.24	.48	-.01	-.01	-.08	-.06	-.12**	-.08	.15**	(.83)			
9. ALNA	1.23	.53	.03	-.06	-.02	-.03	-.08*	-.35**	.15**	.14**	(.87)		
10. Psy Safety	4.30	.75	.03	.05	.13**	.05	.31**	.20**	.04	-.03	-.02	(.90)	
11. Voice	2.85	.87	.03	.05	.25**	.19**	.11**	.05	.07	.00	.05	.13**	(.79)

a. Episode-level correlations obtained using HLM analyses (n = 640). Reliabilities are reported on the diagonal.

b. LPA refers to “Leader Positive Affect,” EPA refers to “Employee Positive Affect,” ALPA refers to “Assessment of Leader’s Positive Affect,” LNA refers to “Leader Negative Affect,” ENA refers to “Employee Negative Affect,” ALNA refers to “Assessment of Leader’s Negative Affect,” and Psy Safety refers to “Psychological Safety.” ** $p < .01$, * $p < .05$.

Level 2 and 3 Variables^a

Variables ^b	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11
1. Dyadic Tenure (month)	16.19	15.44											
2. Interaction Times	18.15	13.20	-.10										
3. Employee Proactivity	3.91	.38	-.02	-.09	(.79)								
4. Employee Susceptibility	3.30	.47	.12	.16	.22	(.78)							
5. Employee EI	3.71	.60	.08	.01	.48**	.23*	(.85)						
6. Employee PA	3.40	.64	.00	-.09	.47**	.21*	.36**	(.86)					
7. Employee NA	2.22	.61	.15	-.06	.10	.07	.09	.34**	(.87)				
8. LMX	3.76	.58	-.11	.21	.17	-.02	.23*	.17	-.13	(.85)			
9. Leader PA	3.47	.45									(.70)	.25	.47**
10. Leader NA	1.23	.53										(.87)	.03
11. TL	3.80	.69											(.74)

a. Below the diagonal are employee-level correlations (n = 85), and above the diagonal are leader-level correlations (n = 36). Reliabilities are reported on the diagonal.

b. Interaction Times refers to “Interaction times during last two weeks,” Proactivity refers to “Proactive Personality,” Employee EI refers to “Employee Emotional Intelligence,” PA refers to “Positive Affectivity,” NA refers to “Negative Affectivity,” and TL refers to “Transformational Leadership.” ** $p < .01$, * $p < .05$

TABLE 2
Parameter Estimates and Variance Components of Null Models for Episode-Level Variables ^a

Variable	Intercept (g_{000})	Episode-Level Variance (e^2) / Percentage	Employee-Level Variance (r^2) / Percentage	Leader-Level Variance (u^2) / Percentage
Leader's positive affect	3.55**	.36** / 46.7%	.06** / 7.8%	.35** / 45.4%
Employee's positive affect	3.52**	.36** / 31.3%	.78** / 67.8%	.01 / .1%
Assessment of leader's positive affect	3.51**	.44** / 42.4%	.53** / 51.2%	.07 / 6.4%
Leader's negative affect	1.32**	.11** / 53.2%	.00 / 0%	.10** / 46.8%
Employee's negative affect	1.24**	.10** / 48.2%	.11** / 51.7%	.00 / .1%
Assessment of leader's negative affect	1.24**	.19** / 69.9%	.08** / 30.1%	.00 / .01%
Psychological safety	4.33**	.30** / 50.6%	.22** / 37.2%	.07** / 12.3%
Upward voice	2.82**	.45** / 61.6%	.06** / 7.8%	.23** / 30.6%

- a. $n = 640$. g_{00} is the pooled intercept representing the average level of variable across individuals; e^2 is the episode-level variance in a variable; r^2 is the employee-level variance in the variable; and u^2 is the leader-level variance in the variable. The percentage of the episode-level variance was computed as $e^2 / (e^2 + r^2 + u^2)$; the percentage of the employee-level variance was computed as $r^2 / (e^2 + r^2 + u^2)$; and the percentage of the leader-level variance was computed as $u^2 / (e^2 + r^2 + u^2)$.

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

TABLE 3
HLM Regressions ^a

Predicting Variables	Outcome Variables	EPA ^b				Psychological Safety			Upward Voice	
		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level 1: Episode Level										
Initiated by Leader		.10	-.04	-.03	-.05	.24**	.22**	.26**	.29**	.26**
Initiated by Employee		.14	-.11	-.03	-.11	.26**	.24**	.27**	.32**	.28**
Interaction Quality		.12**	-.01	-.03	.01	.13**	.11*	.08	.27**	.26**
Leaders' Positive Affect (LPA)		.26**	.31**				.04	.01	.17**	.17**
Employee Positive Affect (EPA)							.23**	.17**	.08	.08
Assessment of Leaders' Positive Affect (ALPA)							.07	.08	.03	.05
Leader's Negative Affect (LNA)				.13**	.19**		.13	.14	.32**	.30**
Employee Negative Affect (ENA)							-.01	.00	-.01	-.01
Assessment of Leaders' Negative Affect (ALNA)							.03	-.01	.12	.12
Employee Psychological Safety										.11**
Pseudo R² ^c		.03	.04	.01	.02	.02	.06	.06	.07	.08
Level 2: Employee-Level Main Effects										
Dyadic Tenure		.00	-.01	.00	.00	.00	.00	.00	.00	.00
Interaction Times		.00	.01	.00	.00	-.01	-.01	-.01*	.01**	.01**
Employee Proactive Personality		.42	.63**	-.03	-.02	.26	.18	-.04	.15	.15
Employee Susceptibility		.51**	.49**	-.08	-.16*	.30*	.18	.32**	.01	.01
Employee EI		-.21	-.33*	-.01	.07	-.17	-.14	-.10	.10	.11
Employee Positive Affectivity		.21	.03	-.07	-.04	.07	.02	.06	-.20*	-.20*
Employee Negative Affectivity		-.22	.01	.09	.06	.04	.10	.02	-.01	-.00
Leader-Member Exchange (LMX)		.49**	.50**	-.11	-.05	.47**	.35**	.38**	.02	.03
Level 2: Employee-Level Cross-Level Effects										
EPA x LMX								-.18*	-.02	-.01
ALPA x LMX								-.20*	-.08	-.04
Pseudo R² ^c		.26	.20	.10	.06	.09	.13	.17	.04	.04
Level 3: Leader-Level Main Effects										
Leader Positive Affectivity		-.24	-.34	-.27**	-.22*	.20	.25	.22	.43	.43
Leader Negative Affectivity		.15	.26	.04	.03	-.03	-.08	-.06	.08	.07
Transformational Leadership		.28	.25	.19	.06	.10	.16	.17	-.25	-.24
Pseudo R² ^c		.01	.04	.00	.00	.07	.07	.09	.04	.04

** $p < .01$ * $p < .05$ **Note:** ^a n (level 1) = 640, n (level 2) = 85, n (level 3) = 36. Unstandardized coefficients are reported. ^b EPA refers to “Employee Positive Affect,” ALPA refers to “Assessment of Leader’s Positive Affect,” ENA refers to “Employee Negative Affect,” and ALNA refers to “Assessment of Leader’s Negative Affect,” ^c Pseudo R² indicates the proportional reduction in the total variance of variables at each level of analysis.

FIGURE 1
Hypothesized Model

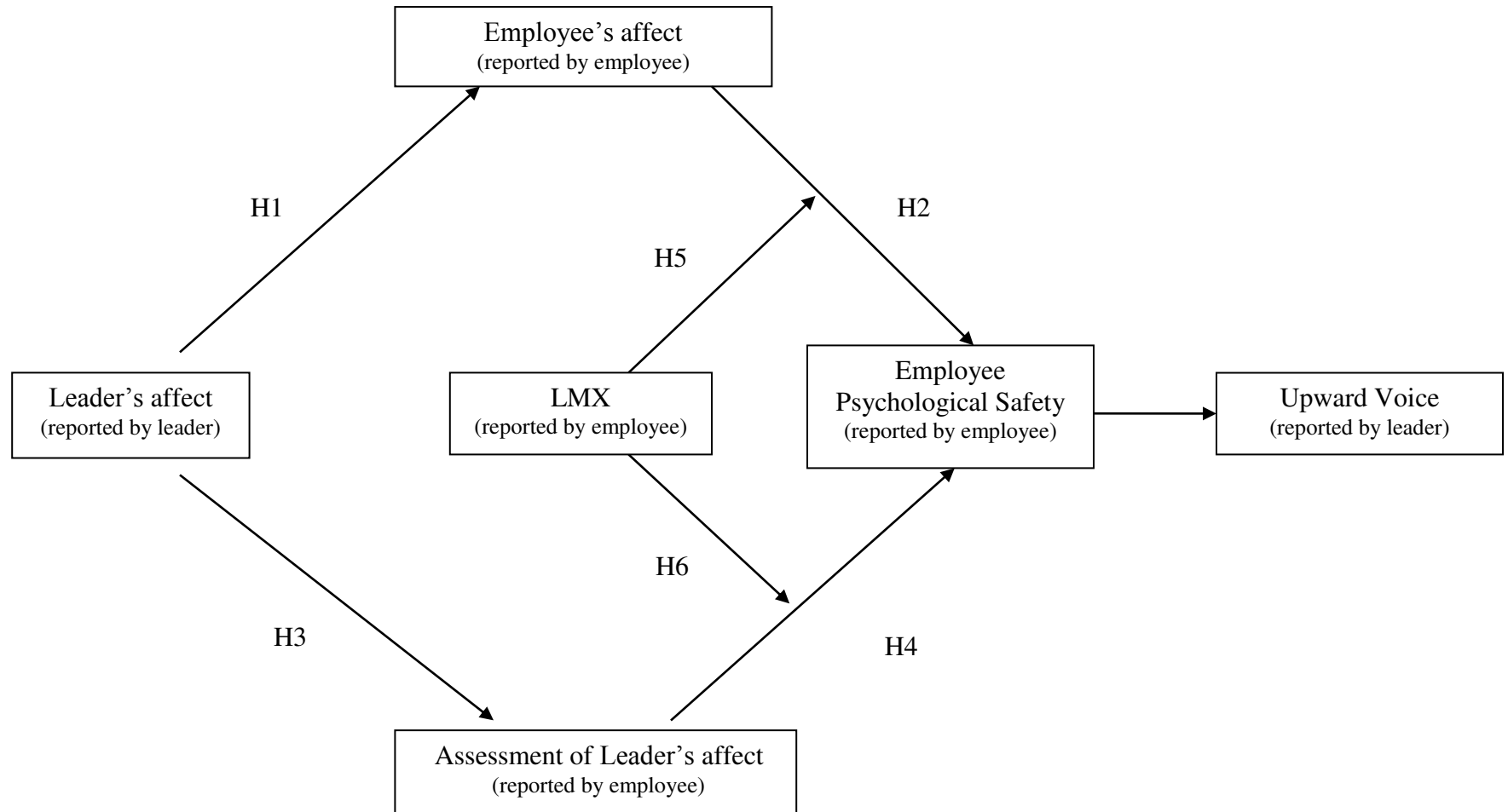
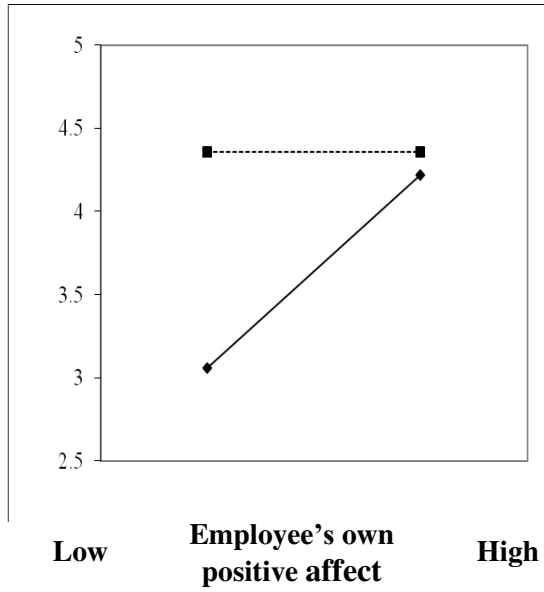


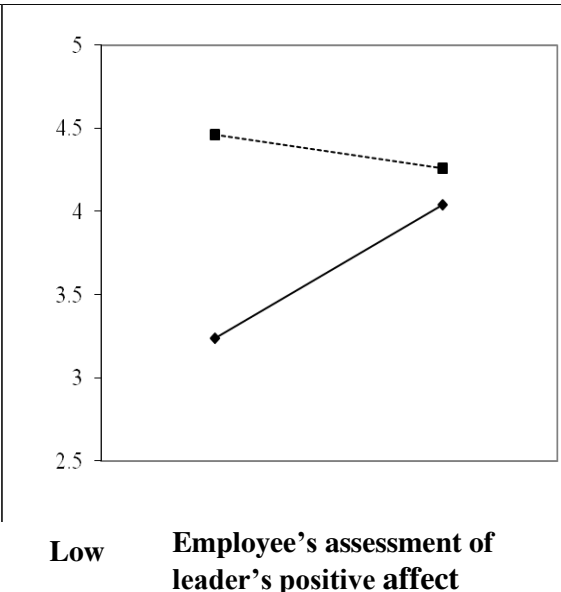
FIGURE 2
The Moderating Effect of LMX
on Two Paths Leading to Psychological Safety

**Employees’
Psychological Safety**

**Employees’
Psychological Safety**



**Employee’s own
positive affect**



**Employee’s assessment of
leader’s positive affect**

◆-----◆
 1 s.d. above the mean of
 LMX

●-----●
 1 s.d. below the mean of
 LMX

Figure 2a

Figure 2b

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