

## **APPLYING UNCERTAINTY MANAGEMENT THEORY TO EMPLOYEE VOICE BEHAVIOR: AN INTEGRATIVE INVESTIGATION**

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Drawing on uncertainty management theory, this study integrates justice research with the elaboration likelihood model and considers employee voice behavior as a function of 3 (interpersonal, procedural, and distributive) facets of justice perceptions in combination. Specifically, a positive relationship is hypothesized between interpersonal justice and employee voice behavior, which is buffered by high procedural justice. This 2-way interaction effect is also examined to determine whether it would be mitigated by low distributive justice. Results from a sample of 395 manager–employee dyads provide support for these predictions. Furthermore, results from a supplementary analysis show that the 3-way interaction effect on employee voice behavior was more pronounced for those who had a high feeling of uncertainty (i.e., those with a shorter job tenure or occupational tenure). Theoretical and practical implications of the findings are discussed.

Firms are becoming increasingly aware that they can gain a greater competitive advantage by extending their knowledge base than by depending only on economies of scale/scope (Grant & Ashford, 2008). They have become more reliant on their workforce as a source of constructive suggestions and insightful ideas (Detert & Burris, 2007; Morrison & Milliken, 2000). Thus, firms are encouraging employee voice (or “speaking up”) behavior, which refers to “making innovative suggestions for change and recommending modifications to standard procedures even when others disagree” (Van Dyne & LePine, 1998, p. 109).<sup>1</sup> Consequently, there is a growing interest in understanding the factors that inhibit or foster such

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<sup>1</sup>For the purpose of this paper, we conceptualize employee voice behavior as an employee’s voluntary provision of ideas and suggestions in order to promote organizational or work-unit effectiveness. It is similar to “voice” or process control in the organizational justice literature, which refers to the opportunities to participate in decision making for

employee voice behavior. Recent research has, in general, suggested that employees are often reluctant to engage in voice behavior because they feel that it could be unsafe and risky to express their frank opinions to their direct superior (Detert & Burris, 2007; Gao, Janssen, & Shi, 2011; Liang, Farh, & Farh, 2012; Morrison, Wheeler-Smith, & Kamdar, 2011; Walumbwa & Schaubroeck, 2009). Their concern about whether it is safe to speak up may stem from them being uncertain about whether or not the supervisor will be open minded enough to listen to or fairly accept their constructive yet challenging ideas. They may also be concerned about whether such behavior could have negative consequences for their own career (Detert & Edmondson, 2011). Accordingly, it is critical for firms to understand how to overcome or reduce their employees' apprehension about speaking up.

The literature on organizational justice is relevant to this question because one of its leading theories, the uncertainty management theory (UMT) (Lind & Van den Bos, 2002; Van den Bos & Lind, 2002), has posited that employees use information on the perceived fairness of their employer and/or supervisor to reduce their feelings of uncertainty and to assess their leaders' trustworthiness (e.g., Van den Bos, Wilk, & Lind, 1998). In particular, research based on this theory has shown that different facets of such perceptions of fairness are processed in a holistic manner and that they interact with each other to influence employee work attitudes and behaviors (Lind & Van den Bos, 2002; Van den Bos & Lind, 2002). In essence, the combined effects of the different perceptions of justice can predict employee attitudes and behaviors above and beyond the effects of any single type of information on fairness (Brockner, Chen, Mannix, Leung, & Skarlicki, 2000; Van den Bos & Lind, 2002).

An integration of these two domains of research suggests that employees may utilize their perceptions of the multiple facets of organizational justice as a heuristic device to reduce their uncertainty regarding their supervisor's trustworthiness before they decide whether it is safe to speak

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the sake of own interests (e.g., Bies & Shapiro, 1988; Folger, 1977), in the sense that they both represent an employee's verbal communication with the organization or people working inside the organization. These two types of "voice" behaviors, however, differ in their domains, underlying purposes, nature, and potential influences. Employee voice behavior pertains to providing ideas about organizational issues and its underlying purpose is to improve collective functioning and effectiveness. It tends to initiate changes that may eventually affect others working in the same micro-environment. So, it can be risky to speak up (Seibert, Kraimer, & Crant, 2001). In contrast, voice in organizational justice literature is instrumental in nature because it pertains to the expressions of demands and needs related to personal benefits. Because process control is often "given" to the employees by the organizations, employees may feel safe to express their views about decisions related to their personal benefits. Previous research (e.g., Burris, Detert, & Chiaburu, 2008; Morrison & Milliken, 2003; Van Dyne & LePine, 1998) has also termed employee voice behavior as "speaking up." In this paper, we use these terms interchangeably.

up. In other words, these perceptions of justice will interact with each other and determine the level of employee voice behavior. However, this important relationship has largely evaded the spotlight in previous research. Drawing on UMT, this study thus aims to extend the research into organizational justice and to contribute to the employee voice behavior literature by considering employee voice behavior as a function of their perceptions of three facets of justice in combination, namely interpersonal, procedural, and distributive justice.

Thus, the main objectives of the study are to examine: (a) the relationship between interpersonal justice and employee voice behavior because voice behavior is communicational in nature (Morrison et al., 2011); (b) the interaction effect between interpersonal and procedural justices on employee voice behavior, using UMT as the theoretical basis; and (c) the mitigating effect of distributive justice (perceptions of the fairness of outcomes), using the elaboration-likelihood model (Petty & Cacioppo, 1986), which is premised on an information processing perspective. It is suggested that distributive justice influences the way people draw inferences about their supervisor's trustworthiness and as such that it modifies the pattern of the interpersonal justice by interacting with the procedural justice aspect and in this way affecting employee voice behavior. The model on the interaction of the multiple facets of justice thus indicates that the extent to which employees digest fairness information in a holistic manner may depend on the particular information processing strategy they use.

Overall, this study enriches and contributes to the research into employee voice behavior and organizational justice in three unique aspects. First, it represents the first attempt to determine *when* an employee will display a holistic tendency in digesting information on fairness. By introducing the elaboration likelihood model (Petty & Cacioppo, 1986) into the justice literature that investigates the combined "effects of multiple justice dimensions" (Colquitt, Greenberg, & Zapata-Phelan, 2005, p. 35), we integrate the information processing aspects of uncertainty management perspective to demonstrate when the combined effects of justice perceptions will be activated to exert a greater impact on employee work behavior. Specifically, we illustrate how distributive justice activates and modifies an employee's information processing strategy. These insights inform and expand current knowledge about the uncertainty management process that underlies the justice effects.

Second, only a limited number of studies have directly examined how the perceptions of the three facets of justice interact with each other in affecting work behavior, for example, counterproductive work behavior (Skarlicki & Folger, 1997; Skarlicki, Folger, & Tesluck, 1999). Other researchers have examined the effects of perceptions of justice on affiliative

organizational citizenship behavior (OCB), but their studies have focused on the effects of only one or two facets of the justice perception (e.g., Colquitt, Conlon, Wesson, Porter, & Ng, 2001; De Cremer, Brebels, & Sedikides, 2008; Lavelle et al., 2009; Tepper & Taylor, 2003). Table 1 provides a brief summary of the existing studies. As you can see from this table, no study thus far has examined the combined effects of the multiple facets of justice on constructive and challenging work behavior (e.g., voice behavior). Such endeavors are needed if organizational scholars are to achieve a comprehensive understanding of the effects of justice. This study addresses this issue by focusing on employee voice behavior because prior research has shown that such behavior contributes to the long-term effectiveness of organizations (cf. Carson, Tesluk, & Marrone, 2007; Stern, Katz-Navon, & Naveh, 2008; Tucker, Singer, Hayes, & Falwell, 2008). Unlike the affiliative OCBs (e.g., being helpful), the change orientation associated with voice behavior may trigger negative reactions in others because the suggestions made often challenge the status quo. This study thus extends the current understanding of the effects of justice perceptions to the effects of promotive-challenging types of work behavior.

Finally, this study is one of the first to synergize the felt uncertainty argument in the voice behavior research and the uncertainty reduction argument in examining the effects of the justice facets. By integrating them, the aim is to develop the theoretical underpinnings for the relationship between the multiple justice facets and employee voice behavior. In addition, the focus on UMT as an overarching framework to explain employee voice behavior transcends the sole reliance on the social exchange perspective as the dominant framework to explain employee extra-role behavior (Zellars & Tepper, 2003).

### *Literature Review and Development of Hypotheses*

#### *Uncertainty Management and Employee Voice: Interpersonal Justice*

Consistent with prior studies in the employee voice literature (e.g., Detert & Burris, 2007; LePine & Van Dyne, 1998, 2001; Tangirala & Ramanujam, 2008; Van Dyne, Cummings, & McLean Parks, 1995), “voice” in this study refers specifically to employees’ actual behavior in “speaking up” with constructive ideas that aim to improve or change the status quo. As such, voice behavior entails a communication process between a sender (i.e., an employee who speaks up) and a receiver (typically, the manager or supervisor). An employee conveys information and ideas to the receiver, proposing constructive changes to improve task accomplishment or the functioning of the unit (Griffin, Neal, & Parker,

TABLE 1  
*Literature Review of Justice Facets Interactions*

| Study  | Interaction effects of justice facets in the study   | Data source   | Design  | Findings  |
|--|--|---|---|---|
| <b>Studies with two- and three-way interaction effects of justice facets</b> |  |   |   |   |
| Ambrose, Seabright, & Schminke (2002)  | Two-way: Distributive injustice (DIJ) × procedural injustice (PIJ) DJJ × interactional injustice (IIJ) PJJ × IIIJ<br>Three-way: DJJ × PJJ × IIIJ | Expert coding of first-person accounts of sabotage activities | Cross-sectional                                     | None of interaction effects of injustice facets on sabotage severity were significant.  |
| Brockner et al. (2003)   | Two-way: PJ × DJ<br>Three-way: PJ × DJ × IJ  | Police officers, college students, licensed dentists          | Cross-sectional (2 studies), Experiment (2 studies) | (a) Compared to low PJ, high PJ heightens the effect of DJ on state self-esteem, and reduces the effect of DJ on organizational commitment.<br>(b) DJ had a significant positive effect on state self-esteem when PJ was high. When PJ was low, the effect was insignificant.<br>(c) Stronger positive effect of DJ on task performance when PJ was high. |

*continued*

TABLE 1 (continued)

| Study                                     | Interaction effects of justice facets in the study | Data source  | Design          | Findings  |
|---|--|--|-----------------|---|
| Cropanzano, Slaughter, & Bachiochi (2005) | Three-way: PJ × IJ × DJ                            | College students   | Cross-sectional | (d) Weaker positive effect of DJ on organizational commitment when PJ was high.<br>The two-way interaction effect of IJ and DJ on organizational attractiveness or intention to apply was significant only when PJ was low. |
| Goldman (2003)                            | Three-way: DJ × PJ × IJ                            | Recently terminated employees                                    | Cross-sectional | The effect of low DJ on legal-claiming was greatest when both PJ and IJ were low.   |
| Rahim, Magner, Antonioni, & Rahman (2001) | Two-way: PJ × IJ<br>Three-way: PJ × IJ × DJ        | U.S. & Bangladesh samples: University faculty members & managers | Cross-sectional | (a) Stronger positive effect of PJ on organizational commitment when IJ was high than low among US faculty.<br>(b) The three-way interaction effect on organizational commitment was nonsignificant in all the samples.     |

*continued*

TABLE 1 (continued)

| Study                     | Interaction effects of justice facets in the study | Data source           | Design          | Findings   |
|---------------------------|--|-----------------------|-----------------|--|
| Skarlicki & Folger (1997) | Three-way: DJ × PJ × IJ                            | Employees & coworkers | Cross-sectional | (c) DJ had a stronger negative effect on turnover intention when PJ was low among Bangladesh managers.<br>(d) DJ had the strongest negative relationship with turnover intention when PJ was low and IJ was high among US faculty. DJ was significantly related to organizational retaliatory behavior (coworker-rated) only when PJ and IJ were low. In the presence of low IJ, low PJ enhanced the retaliation for unfair outcomes (low DJ).<br>Similar findings on the three-way interaction effects on organizational retaliatory behavior as Skarlicki and Folger (1997). |
| Skarlicki et al. (1999)   | Three-way: DJ × PJ × IJ                            | Employees & coworkers | Cross-sectional |  |

*continued*

TABLE 1 (continued)

| Study   | Interaction effects of justice facets in the study | Data source                                  | Design                      | Findings   |
|---|--|--|-----------------------------|--|
| <b>Studies with two-way interaction effects of justice facets</b> |  |  |                             |  |
| Brockner, Siegel, Daly, Tyler, & Martin (1994)                    | Two-way: PJ × DJ                                   | Layoff victims, layoff survivors, lame ducks | Cross-sectional (3 studies) | DJ (outcome negativity) was found to have significant negative relationship with organizational trust and support when PJ was low. The magnitude of these relationships became trivial when PJ was high. |
| Brockner et al. (1997)  | Two-way: PJ × DJ                                   | Employees                                    | Cross-sectional (3 studies) | When outcomes were less favorable (low DJ), PJ had a stronger relationship with support for supervisor and organizational commitment.  |
| Colquitt, Scott, Judge, & Shaw (2006)                             | Two-way: PJ × IJ<br>PJ × DJ<br>IJ × DJ             | College students                             | Experiment                  | (a) Low PJ yielded high counterproductive work behavior (CWB) when IJ was low.<br>(b) Low PJ yielded high CWB when DJ was low.   |

*continued*



TABLE 1 (continued)

| Study                               | Interaction effects of justice facets in the study  | Data source                  | Design                      | Findings   |
|-------------------------------------|---|------------------------------|-----------------------------|--|
| De Cremer & van Knippenberg (2003)  | Two-way: DJ × PJ  | College students             | Experiment (2 studies)      | PJ influenced cooperation in social dilemmas only when DJ was low. No significant effect of PJ on cooperation when DJ was high.      |
| Fields, Pang, & Chiu (2000)         | Two-way: DJ × PJ  | Employees                    | Cross-sectional             | The positive effects of DJ on intent to stay and job satisfaction were more pronounced when PJ was high rather than when it was low. |
| Garonzik, Brockner, & Siegel (2000) | Two-way: PJ × DJ  | International assignees      | Cross-sectional (2 studies) | Higher DJ was associated with fewer thoughts of premature departure among the low PJ assignees.                                      |
| Korsgaard & Roberson (1995)         | Two-way: Instrumental voice-PJ (IVPJ) × noninstrumental voice-PJ (NIVPJ) IVPJ × DJ NIVPJ × DJ | Managers and their superiors | Cross-sectional             | None of the interaction terms was significantly related to satisfaction with appraisal review and trust in manager.                  |

*continued*

TABLE 1 (continued)

| Study                     | Interaction effects of justice facets in the study   | Data source                                     | Design                                    | Findings  |
|---------------------------|--|---|---|---|
| Kwong & Leung (2002)      | Two-way: $IJ \times DJ$<br>$PJ \times DJ$  | College students (study 1), employees (study 2) | Cross-sectional                           | None of the two-way interaction terms had significant effect on happiness, work effort, and stay intention.   |
| McFarlin & Sweeney (1992) | Two-way: $PJ \times DJ$  | Employees                                       | Cross-sectional                           | The relationship between DJ and subordinate's evaluation of supervisor or organizational commitment was stronger when PJ was low rather than when it was high.  |
| Ployhart & Ryan (1997)    | Two-way: Selection decision $\times$ post-offer PJ<br><br>Post-offer PJ $\times$ Post-offer DJ | Graduate school applicants                      | Timelagged (pre-application & post-offer) | (a) Selection decision $\times$ post-offer PJ on post-offer recommendation intention was insignificant.<br>(b) Selection decision $\times$ post-offer PJ was only significant on self-efficacy. When individuals were selected, those who perceived unfair procedures had lower self-efficacy.<br>(c) Post-offer PJ $\times$ DJ on post-offer reapplication intentions or self-assessed |

*continued*

TABLE 1 (continued)

| Study                  | Interaction effects of justice facets in the study | Data source      | Design                    | Findings  |
|------------------------|--|------------------|---------------------------|---|
| Ployhart & Ryan (1998) | Two-way: PJ × DJ                                   | College students | Experiment (longitudinal) | <p>performance was significant, but the DJ-intention or DJ-performance relationship was positive when PJ was high and negative when PJ was low. PJ × DJ was significantly related to post-hire behavioral intentions (future experiment intentions, recommendation intentions) and performance expectation. When participants perceived high PJ, DJ and behavioral intentions was positively associated. When participants perceived low PJ, DJ and behavioral intentions was negatively associated. Consistent interaction pattern for performance expectations.</p> |

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TABLE 1 (continued)

| Study                                   | Interaction effects of justice facets in the study | Data source      | Design                          | Findings  |
|---|--|------------------|---------------------------------|---|
| Smith, Tyler, Huo, Ortiz, & Lind (1998) | Two-way: $IJ \times DJ$                            | College students | Experiment (3 studies)          | When DJ was high, participants rated the test grader significantly more positive when IJ was high than when it was low. When DJ as low, the relationship between IJ and treatment rating was less pronounced.   |
| Stecher & Rosse (2005)                  | Two-way: $DJ \times PJ$<br>$IJ \times PJ$          | College students | Scenario experiment (2 studies) | The two-way interaction terms were not significantly related to the expressions of negative emotion.<br>(a) In Study 1, the interaction of low DJ and high PJ yielded higher intention to improve interpersonal skills.<br>(b) In Study 2, the interaction of low DJ and low PJ, or low IJ and low PJ, yielded higher intention to respond destructively. |

*continued*

TABLE 1 (continued)

| Study   | Interaction effects of justice facets in the study | Data source      | Design                        | Findings  |
|---|--|------------------|-------------------------------|---|
| Tepper (2001)                                 | Two-way: PJ × DJ                                   | Employees        | Temporally lagged (2 studies) | PJ had a stronger association with psychological distress (depression, anxiety, and exhaustion) when DJ was lower.  |
| Weiss, Suckow, & Cropanzano (1999)            | Two-way: DJ × PJ                                   | College students | Experiment                    | (a) Interaction effect of low DJ and low PJ yielded higher anger.<br>(b) Interaction effect of high DJ and high PJ yielded highest guilt or pride.            |
| Van den Bos, Bruins, Wilke, & Dronkert (1999) | Two-way: PJ × DJ                                   | College students | Experiment (3 studies)        | People who receive an unfavorable outcome (low DJ) reacted more positively when the procedure was unfair (low PJ) than when the procedure was fair (high PJ). |

2007). In this study, the focus is on voice behavior that challenges the status quo within the organization and provides constructive suggestions for improving the situation; it does not include issue selling or whistleblowing (Van Dyne et al., 1995).

As noted, the emergence of voice behavior depends greatly on the expectation of a positive reaction on the part of the receivers. Organizational authorities (e.g., managers) are often the key audience for employee voice (Detert & Burris, 2007) because they are the agents of the organization who often have the legitimate power to make changes (Magee & Galinsky, 2008). When the manager is unwilling to consider or accept the employee voice, constructive suggestions are unlikely to be taken up. Such a lack of support from the manager may also undermine the employees' motivation to speak up. Furthermore, because the authority figures are often responsible for allocating rewards and exacting punishment, employees may also be concerned about how the authority figures will interpret and react to their voice behavior (Detert & Burris, 2007). If an employee perceives that the organizational authority may interpret his or her voice behavior as being troublesome or risks jeopardizing unit cohesion, he or she may refrain from speaking up.

Accordingly, the organizational authority figures are likely to have a strong influence on the emergence of employee voice behavior because they determine the uncertainty and potential cost associated with such behavior in the short and long run (Detert & Burris, 2007; Detert & Trevino, 2010). Thus, feelings of uncertainty are likely to play a critical role in determining employee voice behavior (Detert & Trevino, 2010). This study draws on UMT (Lind & Van den Bos, 2002; Van den Bos & Lind, 2002) to provide the theoretical underpinning to articulate how employees may use their perceptions of justice to manage their uncertainty about speaking up. This theory proposes that employees want to "feel certain about their world and their place within it" (Van den Bos & Lind, 2002, p. 5). Specifically, the theory explicates how a feeling of uncertainty reflects the effect of the leadership influence, especially the fairness or unfairness of an authority figure's treatment of them, on employee behavior. Many daily encounters in organizational life involve vertical socialization between an authority figure and a subordinate (Magee & Galinsky, 2008). The authority figures often are the ones who decide and execute reward and punishment on their subordinates. These reinforcements should reflect the extent to which the subordinates have been recognized for their contributions to and value in the organization (Tyler & Lind, 1992). In return, the subordinates are expected to execute orders and directives issued by the authority figure. However, subordinates may worry about being exploited if they cede total power and control to the authority figure (Lind, 2001; Van den Bos, 2001). To confront this fundamental social dilemma, subordinates often rely on

their perceptions of the fairness of the authority figure as heuristic devices to reduce their feelings of uncertainty and assess the trustworthiness of the authority figure (Colquitt, 2008; Van den Bos, Lind, & Wilke, 2001; Van Den Bos, Wilke, & Lind, 1998).

When employees perceive that the organizational authorities treat them with respect and dignity in daily encounters, they are more likely to speak up because their perception of interpersonal justice conveys cues to them that the authorities consider their needs (Colquitt et al., 2001) and are willing to establish and maintain a long-term relationship with them rather than treating each event as a one-shot encounter (Tyler & Lind, 1992). This perception may diminish the employees' feelings of uncertainty (i.e., the apprehension of being exploited) and enhance their trust in the authority figures (Brockner, Siegel, Daly, Tyler, & Martin, 1997). Furthermore, a lower level of felt uncertainty may enhance an employee's identification with the organizational goals (Olkkonen & Lipponen, 2006) and their motivation to display a cooperative attitude at work (Lind & Tyler, 1988; Lind & Van den Bos, 2002; Tyler & Lind, 1992). Because employee voice behavior is potentially risky, in spite of its being promoted as a means of improving organizational effectiveness, employees with higher perceptions of interpersonal justice are more likely to exhibit the behavior due to their lower feelings of uncertainty in their encounters with the organizational authorities. To sum up, the following hypothesis is proposed:

*Hypothesis 1:* A perception of interpersonal justice is positively related to voice behavior.

#### *Moderating Effects of Procedural Justice*

UMT further posits that individuals make use of information on the various facets of organizational justice as heuristic devices to draw an overall inference that they could use in socially uncertain situations (Lind & Van den Bos, 2002). Such a holistic approach to information about different facets of organizational justice suggests that the interaction effects between the various justice facets affect an individual's attitudes and behavior (Van den Bos & Lind, 2002). In a series of studies, Van den Bos and his colleagues (e.g., Van den Bos et al., 2001; Van den Bos, Verumunt, & Wilke, 1997) proposed that an employee forms an overall evaluation of the trustworthiness of an organizational authority by drawing on his or her perceptions of the organization's procedural and distributive justice. The person then processes subsequent or additional information in an automatic manner consistent with his or her overall evaluation (Van den Bos et al., 1997). Findings from past studies have shown that there is a substituting effect of procedural justice on distributive justice, such that

procedural justice mitigates the effect of distributive justice on employee reactions.

In this study, this theoretical rationale is extended to conceptualize the interaction effect of the interpersonal and procedural justice facets on employee voice behavior. Interpersonal justice captures the social side of process fairness, and procedural justice captures the structural aspect of it. The positive effect of interpersonal justice on employee voice behavior may become less pronounced when procedural justice is high because employees may experience lower felt uncertainty when they perceive themselves to be protected by the employer's formal system. Such feelings also spill over into other domains of organizational life (Sluss & Ashford, 2007), and this reduces the weight that an employee assigns to the fairness enacted by an organizational authority. Even when interpersonal justice is low, employees may rely on the formal system to provide them with structural protection. Therefore, it is suggested that a perception of high procedural justice may substitute for the positive effect of interpersonal justice as an influence on employee voice behavior.

When procedural justice is low, employees have less trust in the formal system and thus may perceive a greater uncertainty in their environment (Tyler & Lind, 1992) and experience a lower sense of belonging to the group or the organization (Lind, 2001). They may become more reliant on interpersonal justice to provide them with cues to help them evaluate their situation in the broader environment. Interpersonal fairness may thus exert a stronger effect on employee voice behavior. Statistically, it could be expected that the effect of interpersonal justice on employee voice would be more robust when procedural justice is low. To sum up, the UMT (Lind & Van den Bos, 2002) leads us to propose that procedural justice will mitigate the magnitude of the positive relationship between interpersonal justice and employee voice behavior. The following hypothesis is proposed:

*Hypothesis 2:* Procedural justice moderates the relationship between interpersonal justice and voice behavior such that the relationship is weaker when procedural justice is high rather than low.

#### *Moderating Effects of Distributive Justice*

Furthermore, it is proposed here that the extent to which the interaction of interpersonal and procedural justice influences employee voice behavior is contingent on distributive justice. The elaboration likelihood model (Petty & Cacioppo, 1986) suggests that individuals may process information by selecting from two contrasting strategies: one that scrutinizes all



the information systematically and another that digests information holistically and automatically (Kruglanski & Orehek, 2007). Although the latter strategy (i.e., automatic processing) requires less cognitive effort, one's choice of information processing strategy for an issue depends on the personal relevance of or involvement in the issue (Johnson & Eagly, 1989; Petty & Cacioppo, 1986). When an issue is of greater personal relevance, the focal employee is more likely to process information thoroughly and in a systematic manner (Kruglanski & Orehek, 2007). An individual, however, is inclined to process information more heuristically if the focal issue is judged as being personally less relevant. Applying the elaboration likelihood model to the relationship between the facets of organizational justice and employee voice behavior suggests that the tendency for people to process fairness information heuristically depends on the perceived relevance or importance of an issue to the focal person. It thus highlights a boundary condition for the UMT in which an automatic processing strategy figures prominently (Van den Bos & Lind, 2002).

Specifically, it is proposed here that the level of distributive justice determines whether or not employees consider other justice facets to be personally important. When distributive justice is high, the focal employees do not have to worry about the fairness of their future material outcomes, which are predominantly determined by the authority figure. They may thus find it less important to thoroughly evaluate all the information available to infer the authority figure's trustworthiness. In other words, the authority figure's trustworthiness becomes a less important and salient concern. According to the elaboration likelihood model (Petty & Cacioppo, 1986), employees under these conditions are more likely to use interpersonal and procedural justice as heuristic devices to infer the authority figure's trustworthiness. The mitigating effect of procedural justice on the relationship between interpersonal justice and employee voice behavior will thus be more pronounced. This rationale leads to the proposal of a three-way interaction effect of interpersonal, procedural, and distributive justice on employee voice behavior, such that there will be a stronger interaction effect of interpersonal justice and procedural justice on voice behavior when distributive justice is high.

When distributive justice is low, it conveys messages to the focal employees about the risk of an unfavorable assessment of their value, status, and worth as members of the group and the firm (Blader & Tyler, 2009). It also suggests that the focal employees might worry about the future outcomes for them. In such a case, the focal employees will be more concerned about the authority figure's trustworthiness. According to the elaboration likelihood model, they are then more inclined to process information about the authority figure's interpersonal and procedural justice in a systematic manner. This means that the diminishing effect of

procedural justice on the association between interpersonal justice and employee voice behavior will become weaker. Moreover, when the focal employee has to decide whether or not to speak up, the quality of the authority–employee bond, which is mainly formed by perceptions of interpersonal justice, will become more important than the organization–employee relationship, which is a manifestation of procedural justice. Consequently, when there is a low level of distributive justice, interpersonal justice becomes the only and the most important motivator for the focal employee to speak up. To sum up, the following can be expected:

*Hypothesis 3:* Distributive justice moderates the relationships among interpersonal justice, procedural justice, and voice behavior such that the interaction effect between interpersonal justice and procedural justice is less pronounced when distributive justice is low rather than high.

### *Method*

#### *Participants and Procedures*

As a result of the sampling frame used in this study, the respondents were drawn from a wide variety of industries and occupations. Through connections with 450 undergraduate students in a large university in Hong Kong, 450 employees and their immediate managers were surveyed. The use of student contacts to establish connections with a working sample is relatively common and has been done in previous studies (e.g., Diefendorff & Richard, 2003; Judge, Erez, Bono, & Thorensen, 2003; Liao, 2007). The primary researcher distributed a survey packet to the focal employees having received their consent to participate. The survey packet consisted of two sets of materials: one for the focal employee and the other for his or her immediate manager. Both sets of materials contained an instruction sheet, a cover letter from the researcher, a survey questionnaire, and a self-addressed return envelope. The materials provided to the focal employee differed from those supplied for the manager. All the participants were assured of the confidentiality of their responses and reassured that only the research team would have access to individual responses. In addition, they were instructed to complete the survey questionnaire, put it in the envelope provided, seal it, and sign on the flap before returning it to the researcher.

In total, usable matched datasets for 400 manager–employee dyads were received, representing a response rate of 88.9%. After removal of cases with missing values on the substantive variables, the final sample

contained data from 395 employee–manager dyads. In the employee sample, half of the respondents were male. On average, the employees were 34.56 years old and had an organizational tenure of 6.27 years. The majority were Chinese (95.2%). At the time of the study, they had the rank of entry-level employees (46.6%), team leaders (8.6%), lower level managers (13.4%), middle level managers (11.1%), and higher level managers (20.3%). In the manager sample, 69% of the respondents were female. On average, the managers were 42.16 years old, and had an organizational tenure of 10.47 years. They were predominantly Chinese (94.7%). These respondents were team leaders (23.3%), lower level managers (8.1%), middle level managers (23.3%), and higher level managers (45.3%). The collected data came from participants across various occupations (e.g., accountants, financial analysts, insurance agents, technicians, nurses, architects), organizations (e.g., property management, printing, telecommunications, banks), and industries (20.3% in professional services; 16.2% in services; 15.7% in trading, wholesale, and retail; 12.9% in banking and finance; and the rest in others such as logistics, information technology, and civil services). Due to the diverse background of the participants and the sampling method (i.e., each manager rated only one subordinate), nesting problems were not a serious concern in this study.

### *Measurements*

The employees were asked to provide demographic information about themselves and their perceptions of justice in their workplace. The immediate manager of each employee rated the voice behavior of the respective employee and also provided their own demographic information. All the items were measured using a seven-point Likert-type anchoring (1 = *strongly disagree* to 7 = *strongly agree*).

*Organizational justice facets.* The perceptions of the three forms of justice (interpersonal, procedural, and distributive justice) were measured using Colquitt's (2001) organizational justice inventory. As was done by Colquitt (2001), all the respondents were given an introduction to these measures, which stated "The following items refer to the fairness of the procedures used to arrive at outcomes, fairness of the outcomes themselves, fairness of the interpersonal treatment provided to you." With respect to interpersonal justice, four items related to the interpersonal context were used for two reasons. First, the main interest was to examine how the authority figure's interpersonal treatment might affect the employee's voice behavior. Second, most employee voice behavior took place within this context. A sample item was, "Has the manager treated you in a polite manner?" The reliability for these four items was .88. Procedural justice was assessed using seven items. A sample item was,

“Have you been able to express your views and feelings during those procedures?” The reliability for this scale was .72. Distributive justice was measured using four items. A sample item was, “Does your outcome reflect the effort you have put into the work?” The reliability for this scale was .86.

*Employee voice behavior.* Van Dyne and LePine’s (1998) six-item scale was used to assess employee voice behavior as rated by the managers. Sample items were, “This employee speaks up and encourages others in this group to get involved in issues that affect the group,” “communicates opinions about work issues to others in this group even if his/her opinion is different and others in the group disagree with him/her,” and “keeps well informed about issues where his/her opinion might be useful to this work group.” The reliability for this scale was .87.

*Control variables.* As a supplementary analysis, a separate set of analyses were conducted by including a set of control variables in order to demonstrate the robustness of the findings. Consistent with prior studies (Detert & Burris, 2007; LePine & Van Dyne, 1998; Van Dyne & LePine, 1998), the controls were for the age, gender, race, job tenure, and occupational tenure of both supervisors and employees. These variables were not directly related to the theoretical interests but may have had a confounding impact on employee voice behavior. For example, the control for age was used because older employees tend to feel more confident and assured about proposing solutions to critical problems (Artistico, Cervone, & Pezzuti, 2003). They may thus be more likely to speak up than the younger employees. The sample size was reduced to 330 employee–manager dyads after the control variables were included.

Age was measured on a continuous scale. Gender was measured as a categorical variable (0 = *male*, 1 = *female*). Race was measured by categorizing Chinese respondents as 1 and the other respondents as 0. With respect to job tenure and occupational tenure, the respondents were asked to report how many months they had been working on their current job and in their current occupation.

### *Survey Translation Procedure*

Although English is commonly used in Hong Kong, the surveys were translated into Chinese by a paid, professional translator. Three doctoral students fluent in both English and Chinese were also involved in the survey translation process to ensure the validity and appropriateness of the items in the Chinese context. Two senior doctoral students examined the translated Chinese version of the surveys to identify any concerns. These concerns were addressed through discussion involving the researcher and the doctoral students through an iterative process. Once all

parties were satisfied, another doctoral student back translated the items into English. This process is in line with the procedures recommended by Brislin (1990) for survey translations across different languages.

### *Analytical Strategy*

The first step was to standardize those variables involved in moderation before creating the interaction terms. To test Hypotheses 1 through 3, employee voice behavior was regressed on three facets of organizational justice in Step 1, followed by three two-way interaction terms (interpersonal  $\times$  procedural, interpersonal  $\times$  distributive, and procedural  $\times$  distributive) in Step 2. In Step 3, the three-way interaction term among the interpersonal, procedural, and distributive justice facets was entered into the regression equation. Based on the regression results of the first set of analyses (i.e., without the control variables), the approach suggested by Aiken and West (1991) was followed to probe the two-way and three-way interactions with the values of the moderators calculated at one standard deviation below or above the mean. In the supplementary analysis, the same procedures were repeated, and the control variables were entered in the first step of all the regression equations. We decided to run both sets of analyses as the use of control variables could potential yield misleading interpretation of the findings (Spector & Brannick, 2011). To further examine the combined effects of their perceptions of justice on employee voice behavior under the influence of felt uncertainty, an additional supplementary analysis was conducted on a four-way interaction model. Job tenure and occupational tenure were taken as the proxies of uncertainty (e.g., De Cremer et al., 2010). The effects of two four-way interaction models (i.e., interpersonal justice  $\times$  procedural justice  $\times$  distributive justice  $\times$  job tenure or occupational tenure) on employee voice behavior were tested.

## *Results*

### *Confirmatory Factor Analysis*

Confirmatory factor analyses (CFA) were conducted to examine the distinctiveness of the key variables (interpersonal justice, procedural justice, distributive justice, and employee voice behavior) in this study. The results indicate that the four-factor model fits the data well:  $\chi^2$  (183,  $N = 395$ ) = 379.94,  $p < .001$ , RMSEA = .05, CFI = .97, NFI = .94. The four-factor model was also superior to the alternative models (a two-factor model equating the three facets of perceptions of justice [ $\Delta\chi^2$  ( $\Delta df=3$ ) = 748.38,  $p < .01$ , RMSEA = .12, CFI = .89, NFI = .86] and a

one-factor model equating all substantive variables [ $\Delta\chi^2_{(\Delta df=6)} = 2085.31, p < .01, RMSEA = .18, CFI = .76, NFI = .74$ ]. The CFA results showed that the four variables were distinct from each other.

### *Moderated Regression Analysis*

Table 2 provides the descriptive statistics for all the variables. Given that two sets of analyses (with and without controls) were conducted, correlations between the justice facets and voice behavior above the diagonal for a sample size of 395 are provided, whereas the correlations shown below the diagonal also include the control variables for a sample size of 330.

Table 3 summarizes the regression results. Models 1 to 3 report the standardized beta coefficients ( $\beta$ s) associated with each individual step without the control variables. Models 4 to 7 report the standardized beta coefficients ( $\beta$ s) associated for the analyses with the control variables. The results from Models 1 and 5 indicate that interpersonal justice was positively related to voice behavior ( $\beta = .17, p < .01, \& \beta = .20, p < .01$ , respectively). Hypothesis 1, which posits that interpersonal justice is positively related to voice behavior, was supported.

To test Hypothesis 2, the interpersonal justice  $\times$  procedural justice interaction term was entered after entering all the main effect terms along with two additional two-way interaction terms. Together they accounted for 9% (Model 2) and 10% (Model 6) of the variance in voice behavior, representing a small incremental variance over and above the previous step(s) ( $\Delta F = 2.26, \Delta R^2 = .02, p < .10, \& \Delta F = 2.10, \Delta R^2 = .02, ns$ , respectively). The results from Models 2 and 6 provide support for Hypothesis 2 ( $\beta = -.15, p < .01, \& \beta = -.17, p < .05$ , respectively). A simple slope test of the moderating effect (Aiken & West, 1991) showed that interpersonal justice was positively related with voice behavior when procedural justice was low ( $\beta = .18, p < .01$ , without control variables;  $\beta = .24, p < .01$ , with control variables). When procedural justice was high, the association between interpersonal justice and voice behavior disappeared ( $\beta = .09, ns$ , without control variables;  $\beta = .12, ns$ , with control variable). Figure 1 is a graphical representation of this interaction effect. It shows that the relationship between interpersonal justice and voice behavior was much weaker when procedural justice was high rather than when it was low. In summary, these results combined support Hypothesis 2.

The results from Models 3 and 7 show that the three-way interaction was significant ( $\beta = -.13, p < .05$ , and  $\beta = -.15, p < .05$ , respectively). For both models, the three-way interaction explained an incremental 1% of the variance from the previous step(s) ( $\Delta F = 3.73, \Delta R^2 = .01, p < .05, \& \Delta F = 3.37, \Delta R^2 = .01, p < .05$ , respectively). Figure 2a is a graphical

TABLE 2  
Descriptive Statistics of the Variables<sup>a</sup>

| Variable                              | M      | SD     | 1     | 2     | 3     | 4     | 5     | 6    | 7     | 8     | 9     | 10     | 11    | 12   | 13    |
|---------------------------------------|--------|--------|-------|-------|-------|-------|-------|------|-------|-------|-------|--------|-------|------|-------|
| 1. Interpersonal justice <sup>b</sup> | 4.77   | 1.11   | (.88) | .57** | .44** | .25** |       |      |       |       |       |        |       |      |       |
| 2. Procedural justice <sup>b</sup>    | 4.24   | .74    | .58** | (.72) | .49** | .21** |       |      |       |       |       |        |       |      |       |
| 3. Distributive justice <sup>b</sup>  | 4.32   | 1.00   | .45** | .49** | (.86) | .19** |       |      |       |       |       |        |       |      |       |
| 4. Voice behavior <sup>c</sup>        | 4.80   | .84    | .25** | .21** | .19** | (.87) |       |      |       |       |       |        |       |      |       |
| 5. Employee age                       | 34.80  | 11.48  | -.02  | -.12* | .08   | .01   | -     |      |       |       |       |        |       |      |       |
| 6. Employee gender<br>(1 = female)    | .52    | .50    | .03   | -.03  | -.10  | .01   | -.02  | -    |       |       |       |        |       |      |       |
| 7. Employee race<br>(1 = Chinese)     | 3.88   | .61    | .04   | -.04  | -.03  | -.01  | -.04  | .02  | -     |       |       |        |       |      |       |
| 8. Employee job tenure                | 82.75  | 92.82  | .06   | -.03  | .06   | .02   | .66** | -.01 | .03   | -     |       |        |       |      |       |
| 9. Employee occupational<br>tenure    | 101.62 | 104.25 | .06   | -.03  | .09   | .07   | .74** | -.04 | .02   | .83** | -     |        |       |      |       |
| 1. Supervisor age                     | 41.95  | 9.32   | -.00  | -.06  | .06   | -.01  | .44** | .04  | .00   | .39** | .42** | -      |       |      |       |
| 11. Supervisor gender<br>(1 = female) | .32    | .47    | .00   | .04   | .01   | -.05  | -.00  | .12* | -.06  | -.06  | -.09  | -.19** | -     |      |       |
| 12. Supervisor race<br>(1 = Chinese)  | 3.89   | .64    | .03   | -.03  | .01   | -.02  | -.11* | .02  | .39** | -.04  | -.03  | -.03   | -.09  | -    |       |
| 13. Supervisor job tenure             | 129.74 | 100.65 | -.04  | .01   | .05   | -.03  | .26** | .01  | -.02  | .43** | .38** | .56**  | -.02  | -.07 | -     |
| 14. Supervisor occupational<br>tenure | 122.56 | 92.69  | .02   | .02   | .04   | .10*  | .26** | -.05 | .01   | .39** | .44** | .52**  | -.12* | -.01 | .58** |

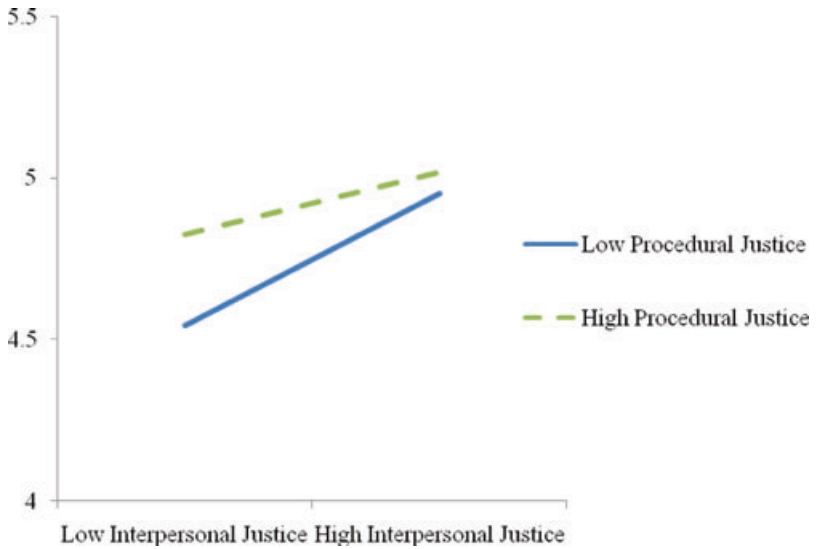
Note. Correlations above the diagonal is for N = 395; correlations below the diagonal is for N = 330. Reliabilities are on the diagonal in parentheses. <sup>a</sup>Means and standard deviations for organizational justice facets are listed for informational purposes only because these were standardized for the regression analyses. <sup>b</sup>These variables were measured from focal employees. <sup>c</sup>Managerial rating. \*p < .05; \*\*p < .01 (two-tailed).

TABLE 3  
*Hierarchical Regression Analyses Results on Voice Behavior<sup>a</sup>*

| Variable  | Voice behavior (N = 395) |         |         | Voice behavior (N = 330) |         |         |         |
|---|--------------------------|---------|---------|--------------------------|---------|---------|---------|
|   | Model 1                  | Model 2 | Model 3 | Model 4                  | Model 5 | Model 6 | Model 7 |
| <i>Controls</i>   |                          |         |         |                          |         |         |         |
| Employee age  |                          |         |         | .03                      | .07     | .08     | .07     |
| Employee gender   |                          |         |         | .03                      | -.05    | -.04    | .05     |
| Employee race (1 = Chinese)                                       |                          |         |         | -.08                     | -.07    | -.07    | -.08    |
| Employee job tenure (months)                                      |                          |         |         | -.15                     | -.17    | -.18    | -.18    |
| Employee occupational tenure (months)                             |                          |         |         | .15                      | .13     | .13     | .14     |
| Supervisor age  |                          |         |         | -.13                     | -.13    | -.13    | -.14    |
| Supervisor gender   |                          |         |         | .00                      | -.02    | -.03    | -.04    |
| Supervisor race (1 = Chinese)                                     |                          |         |         | .04                      | .03     | .03     | .04     |
| Supervisor job tenure (months)                                    |                          |         |         | -.05                     | -.02    | -.01    | -.01    |
| Supervisor occupational tenure (months)                           |                          |         |         | .18*                     | .15*    | .15*    | .15*    |
| <i>Main effects</i>   |                          |         |         |                          |         |         |         |
| Interpersonal justice   | .17**                    | .16**   | .17**   |                          | .20**   | .18*    | .21**   |
| Procedural justice  | .07                      | .08     | .12     |                          | .09     | .10     | .15*    |
| Distributive justice  | .09                      | .08     | .13*    |                          | .03     | .04     | .09     |
| <i>Two-way interactions</i>                                       |                          |         |         |                          |         |         |         |
| Interpersonal justice × procedural justice                        |                          | -.15**  | -.18**  |                          |         | -.17*   | -.18*   |
| Interpersonal justice × distributive justice                      |                          | .00     | -.01    |                          |         | .00     | -.03    |
| Procedural justice × distributive justice                         |                          | .12     | .13     |                          |         | .14     | .16*    |
| <i>Three-way Interaction</i>                                      |                          |         |         |                          |         |         |         |
| Interpersonal justice × procedural justice × distributive justice |                          |         | -.13*   |                          |         |         | -.15*   |
| <i>Overall F</i>  |                          |         |         |                          |         |         |         |
| F change  | 10.21***                 | 6.28*** | 5.96*** | 1.29                     | 3.28*** | 3.09*** | 3.13*** |
| R <sup>2</sup> change   | .07                      | .26+    | 3.73*   | .04                      | 9.58*** | 2.10    | 3.37*   |
|   |                          | .020    | .01     |                          | .08     | .02     | .01     |

Note. <sup>a</sup>Entries are standardized regression coefficients. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$  (two-tailed).



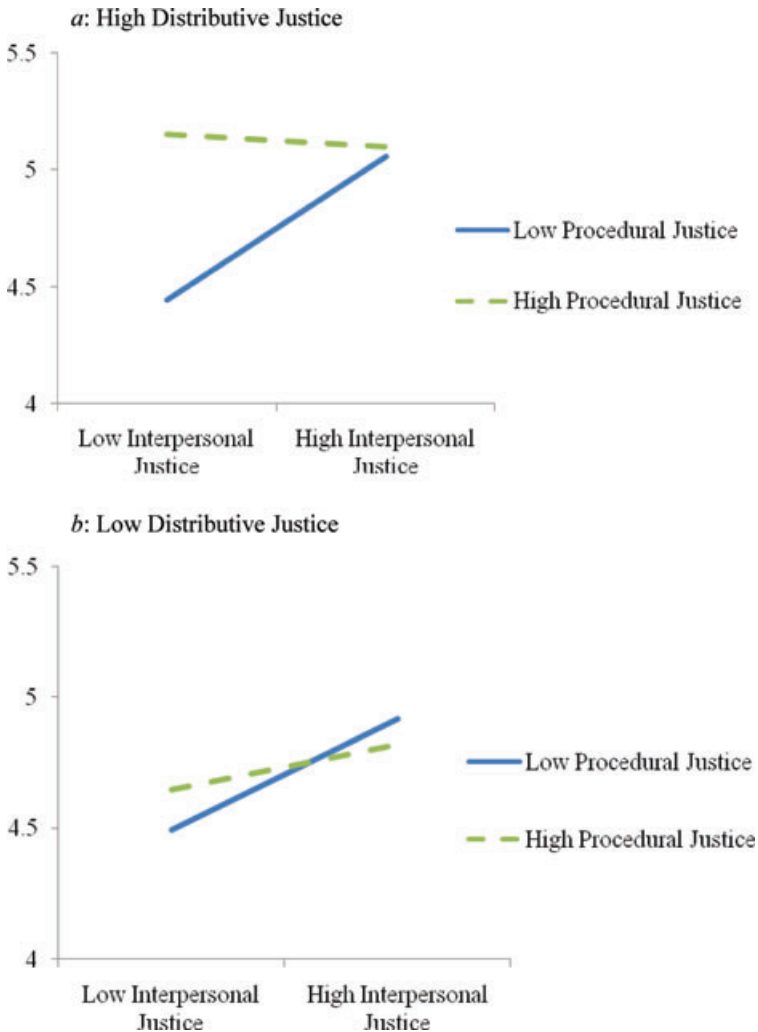


**Figure 1: Moderating Effect of Procedural Justice on Interpersonal Justice and Voice Behavior Relationship.**

representation of the interaction effect of interpersonal justice and procedural justice on employee voice behavior when distributive justice is high. This figure shows an interaction effect that is similar to that of Figure 1. Figure 2b shows a weaker interaction effect between interpersonal justice and procedural justice on voice behavior when distributive justice is low. The results from simple slope tests (Aiken & West, 1991) provide further support for these observations. Under conditions of high distributive justice, the effect of interpersonal justice on employee voice behavior is significant when procedural justice is low ( $\beta_1 = .37, p < .01$ ) and nonsignificant when procedural justice is high ( $\beta_2 = -.03, ns$ ). The two slopes significantly differ ( $\Delta\beta_{21} = -.40, p < .01$ ). When distributive justice is low, interpersonal justice has a positive effect on employee voice behavior when procedural justice is low ( $\beta_3 = .25, p < .01$ ), and the effect disappears when procedural justice is high ( $\beta_4 = -.10, ns$ ). There is no significant difference between the two slopes ( $\Delta\beta_{43} = -.15, ns$ ). These results provide support for Hypothesis 3.

#### *Supplementary Analysis on Four-Way Interaction Effect*

Although not explicitly hypothesized, it was expected that the relationship between the combined effects of the multiple justice facets and employee voice behavior would be affected by the level of the



**Figure 2: Mitigating Effect of Distributive Justice on Interpersonal Justice, Procedural Justice, and Voice Behavior Relationship.**

*Note.* Figure 2a: High distributive justice; Figure 2b: Low distributive justice

employees' felt uncertainty in the workplace. In general, it was expected that organizational justice would have a stronger relationship with employee voice behavior when uncertainty is higher than when it is lower. A supplementary analysis was conducted, using the focal employees' job and occupational tenures to capture the levels of felt uncertainty of employees. The rationale is that employees with longer job tenure or occupational

tenure are more confident about their own standing as an organizational member (De Cremer et al., 2010) and more familiar with their supervisor's leadership style (Ambrose & Cropanzano, 2003). Perceptions of justice may thus play a relatively trivial role in reducing their uncertainties about their superior's trustworthiness (Lind, Kray, & Thompson, 2001), resulting in a weaker relationship between the three-way interaction among the perceptions of the three facets of justice and employee voice behavior. In contrast, employees with shorter tenures are more interested in developing a successful career in their organizations (Rhodes, 1983). They are more responsive to the uncertainties of the micro-environment and thus have a stronger inclination to make sure of their supervisor's trustworthiness based on information about their fairness. Therefore, it was expected that the three-way interaction effect on employee voice behavior would be more pronounced for employees with shorter job tenure or occupational tenure.

The results of tests on these expectations are summarized in Tables 4 and 5. In each table, Models 1 and 2 report the standardized beta coefficients ( $\beta$ s) about each step without control variables. Model 3 reports the standardized beta coefficients ( $\beta$ s) with control variables. The results from Models 2 and 3 indicate a significant four-way interaction effect among interpersonal, procedural, and distributive justice and employee job tenure on employee voice behavior ( $\beta = .29, p < .01$ , and  $\beta = .34, p < .01$ , respectively). This four-way interaction explained an incremental 2% of the variance from the previous step ( $\Delta F = 9.95, \Delta R^2 = .02, p < .01$ ). Figure 3a is a graphical representation of the three-way interaction effect of the facets of justice on voice behavior when employee job tenure is high. Simple slope tests demonstrate that, when distributive justice is high, the effect of interpersonal justice on the level of employee voice behavior is significant when procedural justice is low ( $\beta_1 = .29, p < .05$ ) rather than when it is high ( $\beta_2 = .05, ns$ ). Yet, the difference between these two slopes is not significant ( $\Delta\beta_{21} = -.24, ns$ ). Even if distributive justice is low, interpersonal justice still has a positive effect on employee voice behavior when procedural justice is low ( $\beta_3 = .26, p < .05$ ) but not when procedural justice is high ( $\beta_4 = -.08, ns$ ). The difference between the two slopes is significant ( $\Delta\beta_{43} = -.34, p < .05$ ).

When employee job tenure is low, the simple slope effects shown in Figure 3b demonstrate a pattern similar to the one shown in Figure 2. When distributive justice is high, interpersonal justice is positively related with employee voice behavior when procedural justice is low ( $\beta_1 = .44, p < .01$ ) rather than high ( $\beta_1 = -.05, ns$ ). The two slopes significantly differ ( $\Delta\beta_{21} = -.49, p < .05$ ). When distributive justice is low, interpersonal justice has a positive effect on employee voice behavior when procedural justice is high ( $\beta_4 = .36, p < .05$ ) rather than low ( $\beta_3 = .22, ns$ ).

TABLE 4  
*Hierarchical Regression Analyses Results on Voice Behavior<sup>a</sup>: Four-Way Interaction Effect for Job Tenure*

| Variable  | Voice behavior |         |         |
|---|----------------|---------|---------|
|   | Model 1        | Model 2 | Model 3 |
| <i>Controls</i>   |                |         |         |
| Employee age  |                |         | .09     |
| Employee gender   |                |         | .04     |
| Employee race (1 = <i>Chinese</i> )   |                |         | -.07    |
| Employee job tenure (months)  | -.03           | -.02    | -.22*   |
| Employee occupational tenure (months)   |                |         | .10     |
| Supervisor age  |                |         | -.14*   |
| Supervisor gender   |                |         | -.06    |
| Supervisor race (1 = <i>Chinese</i> )   |                |         | .04     |
| Supervisor job tenure (months)  |                |         | -.04    |
| Supervisor occupational tenure (months)   |                |         | .19*    |
| <i>Main effects</i>   |                |         |         |
| Interpersonal justice   | .21**          | .20**   | .22**   |
| Procedural justice  | .10            | .10     | .10     |
| Distributive justice  | .12            | .11     | .09     |
| <i>Two-way interactions</i>   |                |         |         |
| Interpersonal justice × procedural justice  | -.20**         | -.18*   | -.23**  |
| Interpersonal justice × distributive justice  | .03            | .07     | .08     |
| Procedural justice × distributive justice   | .12            | .07     | .10     |
| Interpersonal justice × employee job tenure   | -.06           | -.14    | -.12    |
| Procedural justice × employee job tenure  | .14            | .06     | .02     |
| Distributive justice × employee job tenure  | .02            | -.07    | .02     |
| <i>Three-way interaction</i>  |                |         |         |
| Interpersonal justice × procedural justice × distributive justice                       | -.13           | -.12    | -.13    |
| Interpersonal justice × procedural justice × employee job tenure                        | .02            | .01     | -.08    |
| Interpersonal justice × distributive justice × employee job tenure                      | .00            | .14     | .19     |
| Procedural justice × distributive justice × employee job tenure                         | .07            | .00     | .03     |
| <i>Four-way interaction</i>   |                |         |         |
| Interpersonal justice × procedural justice × distributive justice × employee job tenure |                | .29**   | .34**   |
| Overall F   | 3.51***        | 4.03*** | 3.24*** |
| F change  |                | 9.95**  |         |
| R <sup>2</sup> change   | .12            | .02     | .20**   |

Note. <sup>a</sup>Entries are standardized regression coefficients. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed).

TABLE 5  
*Hierarchical Regression Analyses Results on Voice Behavior<sup>a</sup>: Four-Way Interaction Effect for Occupational Tenure*

| Variable  | Voice behavior |         |         |
|---|----------------|---------|---------|
|   | Model 1        | Model 2 | Model 3 |
| <i>Controls</i>   |                |         |         |
| Employee age  |                |         | .09     |
| Employee gender   |                |         | .04     |
| Employee race (1 = <i>Chinese</i> )   |                |         | -.06    |
| Employee job tenure (months)  |                |         | -.17    |
| Employee occupational tenure (months)                                       | .03            | .03     | .04     |
| Supervisor age  |                |         | -.14    |
| Supervisor gender   |                |         | -.07    |
| Supervisor race (1 = <i>Chinese</i> )                                       |                |         | .03     |
| Supervisor job tenure (months)  |                |         | -.02    |
| Supervisor occupational tenure (months)                                     |                |         | .19*    |
| <i>Main effects</i>   |                |         |         |
| Interpersonal justice   | .19**          | .18**   | .23**   |
| Procedural justice  | .13            | .12     | .11     |
| Distributive justice  | .11            | .10     | .07     |
| <i>Two-way interactions</i>   |                |         |         |
| Interpersonal justice × procedural justice                                  | -.22**         | -.19**  | -.23**  |
| Interpersonal justice × distributive justice                                | .03            | .07     | .08     |
| Procedural justice × distributive justice                                   | .13            | .08     | .09     |
| Interpersonal justice × employee occupational tenure                        | -.06           | -.12    | -.10    |
| Procedural justice × employee occupational tenure                           | .10            | .02     | -.00    |
| Distributive justice × employee occupational tenure                         | .01            | -.07    | -.08    |
| <i>Three-way interaction</i>  |                |         |         |
| Interpersonal justice × procedural justice × distributive justice           | -.12           | -.10    | -.10    |
| Interpersonal justice × procedural justice × employee occupational tenure   | .03            | .04     | .08     |
| Interpersonal justice × distributive justice × employee occupational tenure | .06            | .18     | .21     |
| Procedural justice × distributive justice × employee occupational tenure    | .00            | -.06    | -.05    |

*continued*

TABLE 5 (continued)

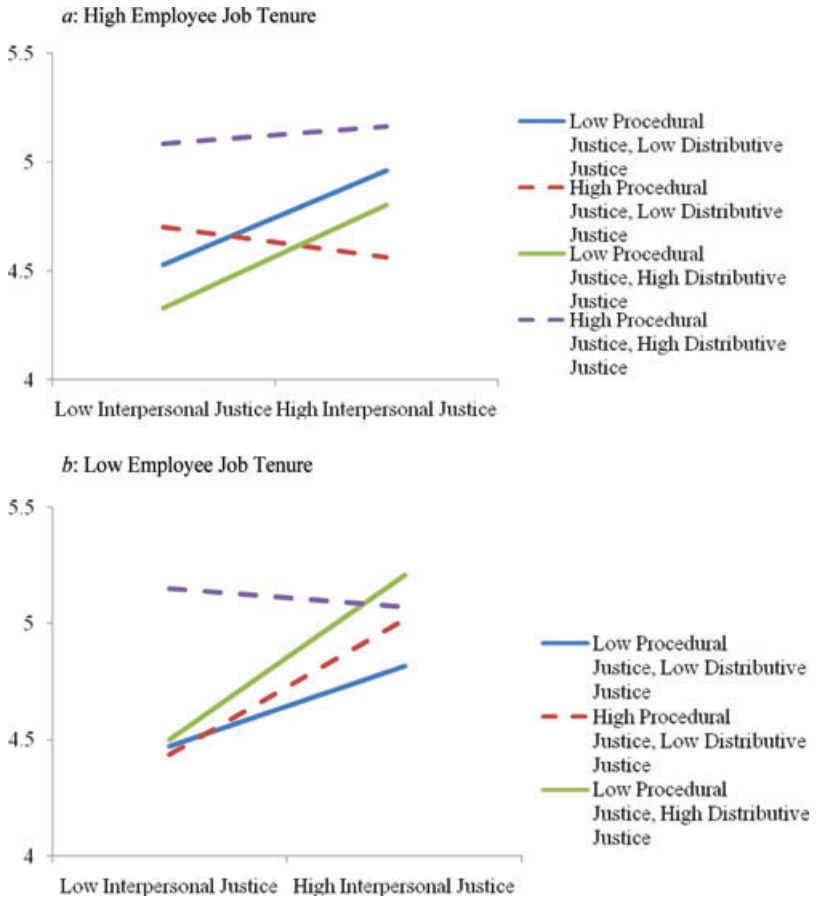
| Variable   | Voice behavior |         |         |
|--|----------------|---------|---------|
|  | Model 1        | Model 2 | Model 3 |
| <i>Four-way interaction</i>  |                |         |         |
| Interpersonal justice × procedural justice × distributive justice × employee occupational tenure |                | .27**   | .32**   |
| Overall F  | 3.37***        | 3.93*** | 3.14*** |
| F change   |                | 10.52** |         |
| R <sup>2</sup> change  | .12            | .03     | .20     |

Note. <sup>a</sup>Entries are standardized regression coefficients. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed).

These two effects are not significantly different from each other ( $\Delta\beta_{43} = .14, ns$ ). Overall, the results indicate that the three-way interaction hypothesized is more likely to occur when employee job tenure is low rather than when it is high.

As shown in Table 5, a significant four-way interaction is found among interpersonal, procedural, and distributive justice together with employee occupational tenure that affected voice behavior ( $\beta = .27, p < .01$ , without control variables; &  $\beta = .32, p < .01$ , with control variables). The results explained an incremental 3% of the variance beyond the previous step ( $\Delta F = 10.52, \Delta R^2 = .03, p < .01$ ). Figure 4a is a graphical representation of the three-way interaction effect of the justice facets on voice behavior when employee occupational tenure is high. Simple slope tests demonstrate that, when distributive justice is high, the effect of interpersonal justice on employee voice behavior is significant when procedural justice is low ( $\beta_1 = .35, p < .05$ ) and nonsignificant when procedural justice is high ( $\beta_2 = .09, ns$ ). The two slopes do not differ ( $\Delta\beta_{21} = -.26, ns$ ). When distributive justice is low, interpersonal justice does not affect employee voice behavior regardless of whether procedural justice is low ( $\beta_3 = .23, ns$ ) or high ( $\beta_4 = .03, ns$ ). These two slopes also do not differ ( $\Delta\beta_{43} = -.20, ns$ ).

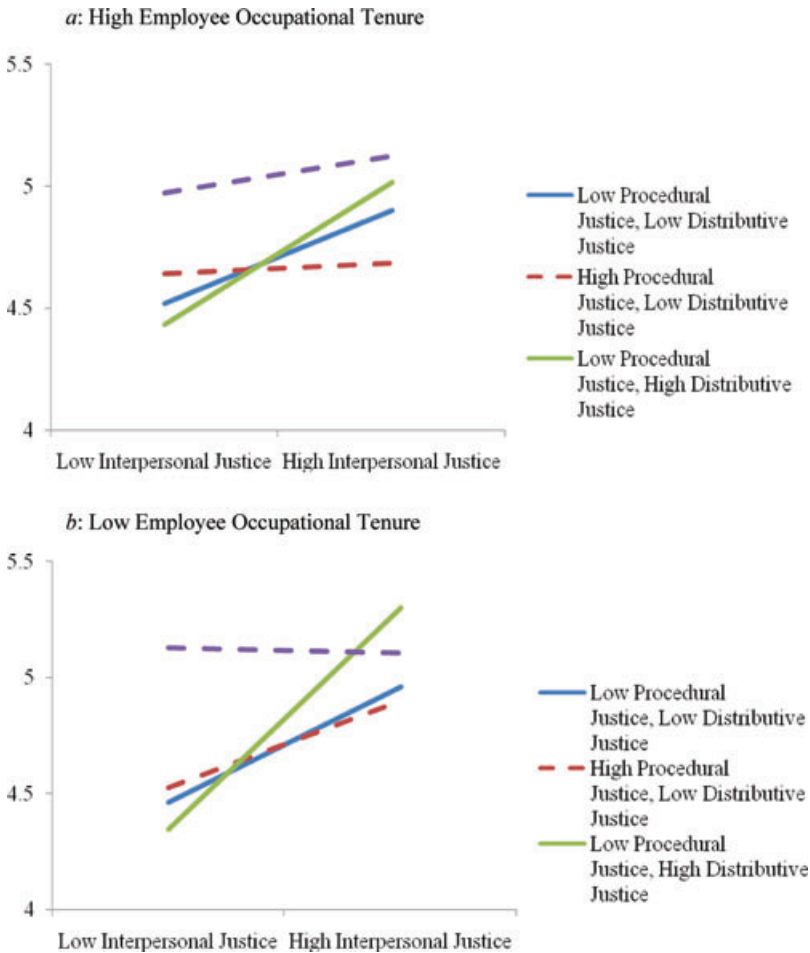
However, when employee occupational tenure is low, Figure 4b reveals a pattern that is more similar to the one shown in Figure 2. When distributive justice is high, interpersonal justice is positively associated with employee voice behavior when procedural justice is low ( $\beta_1 = .60, p < .01$ ) rather than high ( $\beta_1 = -.02, ns$ ). Moreover, the difference in these two effects is highly significant ( $\Delta\beta_{21} = -.62, p < .01$ ). When distributive



**Figure 3: Employee Job Tenure as a Moderator to the Mitigating Effect of Distributive Justice on Interpersonal Justice, Procedural Justice, and Voice Behavior Relationship.**

Note. Figure 3a: High employee job tenure; Figure 3b: Low employee job tenure

justice is low, interpersonal justice has a positive effect on employee voice behavior when procedural justice is low ( $\beta_3 = .31, p < .05$ ) rather than high ( $\beta_4 = .24, ns$ ). However, there is no significant difference in these two effects ( $\Delta\beta_{43} = -.13, ns$ ). In short, the results show that the three-way interaction among interpersonal, procedural, and distributive justice is more likely to occur when employee occupational tenure is low rather than high.



**Figure 4: Employee Occupational Tenure as a Moderator to the Mitigating Effect of Distributive Justice on Interpersonal Justice, Procedural Justice, and Voice Behavior Relationship.**

*Note.* Figure 4a: High employee occupational tenure; Figure 4b: Low employee occupational tenure

### *Discussion*

This study aimed to develop the theoretical reasoning for, and empirically test, the interaction effects of three facets of perceptions of justice on employee voice behavior. The results indicate that interpersonal justice generally had a positive relationship with voice behavior. The relationship was moderated by procedural justice such that the relationship was weaker



when procedural justice was high rather than low. Distributive justice further moderated this two-way interaction effect on voice behavior such that the interaction effect was less pronounced when distributive justice was low rather than high. Above all, this three-way interaction effect was more pronounced for employees with shorter job or occupational tenure. The results also appear to be highly robust across two analyses with and without the control variables, indicating that the findings are not a result of the statistical artifact.

### *Theoretical and Managerial Implications*

This study addresses an important yet underresearched question in the employee voice behavior literature: How do the multiple facets of organizational justice affect employee voice behavior? Both employee voice behavior (Detert & Burris, 2007; Walumbwa & Schaubroeck, 2009) and organizational justice research (Van den Bos & Lind, 2002) have reasoned that when employees have feelings of uncertainty this will affect their work attitudes and behavior. Specifically, UMT (Lind & Van den Bos, 2002; Van den Bos & Lind, 2002) proposes that perceptions of justice are heuristic devices to reduce uncertainty, and this should have both theoretical and practical implications on employee voice behavior because feelings of uncertainty tend to inhibit voice behavior. By drawing on UMT, it is thus possible to articulate the relationship between perceptions of justice and employee voice behavior.

Specifically, this study suggests that employees make sense of the uncertainties in their situation based on their perceptions of justice and use this to guide their engagement in voice behavior. The results suggest that if organizational authorities display respect whenever they encounter employees this would encourage employee voice behavior. Moreover, the nature of the interaction effects found in this study suggests that employees utilize information on the multiple facets of fairness in their working environment to reduce their concerns about the trustworthiness of their superiors. It is evident, therefore, that being treated with respect by the authority figure (i.e., interpersonal justice) has a more salient and important effect on voice behavior when the employees perceive a low level of procedural justice. Overall, the results suggest the value of UMT to account for employees' voluntary engagement in voice behavior.

Moreover, this study extends previous justice research by underscoring the implications of the elaboration likelihood model to account for the interaction effects of the different facets of justice on different aspects of employee behavior, including voice behavior. The findings reveal that the interpersonal justice  $\times$  procedural justice interaction was more likely to occur when an employee processes information on fairness in a holistic

manner. Based on UMT, this study suggests that distributive justice is a factor affecting the choice of information processing strategy because it signals the personal relevance of information on all aspects of fairness to their sense of vulnerability about involvement in voice behavior. The elaboration likelihood model thus provides a decent theoretical basis for conceptualizing the effect of the interaction among interpersonal, procedural, and distributive justice on employee voice behavior. In addition, job tenure and occupational tenure were used to tap into an employee's felt uncertainty in the supplementary analysis of a four-way interaction model among the multiple facets of justice and their effect on the employees' level of uncertainty. The results reveal the crucial role of the creation of a fair and just workplace to promote employee voice behavior, especially for employees who feel more uncertain in their workplace. This study adds to the research using the UMT perspective by testing the effects of the employees' felt uncertainty with two proxies based on employee tenure.

Furthermore, this study is one of the first to examine the relationship between employees' perceptions of interpersonal justice and their voice behavior. It contributes extra evidence to the nomological network of employee voice behavior beyond the person-centered leadership predictors such as leader-member exchange (LMX; e.g., Van Dyne, Kamdar, & Joireman, 2008). It also adds to the relatively small body of empirical research that examines the interaction among multiple facets of justice on employee behavior, which has largely focused on affiliative OCBs (e.g., De Cremer et al., 2008) and counterproductive behaviors (e.g., Skarlicki & Folger, 1997; Skarlicki et al., 1999) thus far. The focus on employee voice behavior and the findings in this study expand the line of reasoning to cover promotive, challenging behavior.

More specifically, across four studies, De Cremer et al. (2008) found that distributive and procedural justice facets interaction on the outcomes (organizational commitment, individual initiative, performance with customers) was more pronounced when uncertainty was relatively high, that is, three-way interaction among distributive justice, procedural justice, and perceived uncertainty. We also found similar interaction effect between interpersonal and procedural justice on voice behavior. Although they examined individual initiative (i.e., a type of OCB which is very similar to voice behavior) in study 3, we cannot discern if such interaction effect captured the interpersonal aspect of the procedure (how the procedure is enacted by the authority figure) or the procedure itself (cf. Colquitt, 2001), given that interpersonal justice was not included in their study. Similarly, Skarlicki et al. (1999) found significant three-way interaction effect among three facets of justice on retaliation behaviors (which may be considered conceptual opposite of OCB). Even though the main effects of justice facets on retaliation behaviors are negative (expectedly so), the

coefficient for the three-way interaction effect in their study is negative, which possesses the same direction with that in this study. Although speculative, the interpersonal justice may have stronger impact in the Chinese context where interpersonal relationship is considered more vital (cf. Farh, Tsui, Xin, & Cheng, 1998) than that in the U.S. Future studies can actually test if this indeed is the case using cross-cultural dataset or theorizing on relevant cultural values (such as individualism/collectivism or power distance, for instance) as additional moderators of this three-way interaction effect on positive as well as negative employee extra-role behaviors.

This study offers practical insights to managers. There is increasing evidence of the value of encouraging employees to bring forward provocative, yet constructive, suggestions that can contribute to organizational learning and adaptive advantage (Ashford, Rothbard, Piederit, & Dutton, 1998; Edmondson, 1999, 2003). The findings in this study reveal the importance of a fair and just workplace for promoting voice behavior, especially for employees who feel more uncertain in their workplace. The study demonstrates that organizations should construct an environment where those in authority routinely treat their subordinates with respect and dignity. This may be done through providing proper training for managers on interpersonal skills and ways of improving morale in their subordinates. To reduce worry among the employees about potential negative consequences resulting from assertive behavior (e.g., Seibert et al., 2001), firms should also put in place a formal system with consistent and bias-free procedures, and a fair allocation of outcomes.

#### *Limitations and Future Research Directions*

The findings of this study need to be addressed in the light of several shortcomings. First, the cross-sectional design prevented inferences being made about the causality between the employees' perceptions of justice and their voice behavior. Perhaps those employees who did express their concerns in this respect felt that they could safely express their opinions because they had confidence in the fair interpersonal treatment by the organizational authority (Korsgaard, Roberson, & Rymph, 1998). However, the focal interest of this study was to examine the combined rather than the individual influences of the three facets of justice on employee voice behavior. The findings on the multiple interaction effects proposed and found in this study are less likely to be accounted for by a reverse causality. A separate test was conducted to examine the potential reverse causality by reversing the sequence of the interpersonal justice–employee voice behavior relationship. The results did not yield a significant three-way interaction effect among voice behavior and the perceptions of the three facets of justice. It is thus safe to believe that reverse causality is

not a serious issue in this study. However, it is not possible to rule it out entirely in the light of the cross-sectional research design. Future research may address this concern by replicating this study using a longitudinal design.

Second, the effect sizes for the significant interaction effects are relatively small in this study. There may be two reasons for this. First, there are theoretical constraints on the interaction effects as it was not expected that interpersonal justice would be negatively related with employee voice behavior, regardless of whether procedural justice or distributive justice was high or low. This constraint decreases the magnitude of the incremental  $R^2$ . Second, there are practical restraints in terms of sampling the respondents. In this study, it was impossible to sample more respondents who might report high levels of distributive justice and low levels of interpersonal and procedural justice at the same time. If that had been the case, the magnitude of the joint distribution between distributive justice and the interaction term of the interpersonal  $\times$  procedural justice interaction (McClelland & Judd, 1993) would be greater. However, it was practically impossible to identify such respondents beforehand in a field survey research. Future researchers should be encouraged to replicate this study with a laboratory experiment where, via manipulation, it is easier to obtain more extreme ratings for process and outcome fairness.

Third, only limited attention was paid to the context in which these proposed relationships take place. For example, the importance and implications of different perceptions of justice may also depend on the specific contextual settings, as reflected in such things as the organizational structure, group norms, or the cultural context (cf., Morrison et al., 2011). Although job tenure and occupational tenure were used as proxies for felt uncertainty in this study, we strongly recommended that future research replicate this study with direct measures of felt uncertainty (e.g., uncertainty about standing as an organizational member; De Cremer et al., 2010).

Finally, this study differentiates employee voice behavior from process control, which is typically examined as a component of procedural justice in organizational justice research (Bies & Shapiro, 1988; Folger, 1977). We are not aware of any existing study that examines how other types of justice perceptions may modify the association between these two types of "voice." Future research may explore why and how fair treatment in organizations can help persuade those who speak up for personal interests (i.e., process control) to speak up also for organizational benefits (i.e., employee voice behavior). This may be an interesting research direction that would enrich current knowledge on the relationship between organizational justice and employee voice behavior. In addition, although employee voice behavior was the only dependent variable examined in

this study, it is not the intention to limit the scope of this conceptualization only to voice behavior. It is recommended that future research enlarge the domain of empirical investigation by testing other types of employee challenging behavior, such as issue selling or whistleblowing (cf. Van Dyne et al., 1995).

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