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Running Head: FORMS OF UNCERTAINTY AND PROCEDURAL FAIRNESS

**Being Uncertain about What? Procedural Fairness Effects  
as a Function of General Uncertainty and Belongingness Uncertainty**

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## Abstract

Do different forms of uncertainty account for different procedural fairness effects? We hypothesized that general uncertainty accounts for fairness judgments, whereas belongingness uncertainty accounts for group identification. Experiment 1 manipulated general versus belongingness uncertainty. Participants in the general uncertainty condition regarded the procedures as fairer when they were granted than denied voice, whereas participants in the belongingness uncertainty condition showed stronger group identification when they were granted than denied voice. Experiment 2 split the belongingness uncertainty condition into family and stranger uncertainty. Only participants in the family-belongingness uncertainty condition identified with their group when they were granted than denied voice. The findings have implications for the construct of uncertainty, models of procedural fairness, and group membership.

**Keywords:** procedural fairness, uncertainty, belongingness

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**Being Uncertain About What? Procedural Fairness Effects**

**as a Function of General Uncertainty and Belongingness Uncertainty**

Fairness is a pervasive concern in social life (Miller, 2001). Our focus in this article is on a particular type of fairness, procedural fairness (Thibaut & Walker, 1975; Tyler, 1988). This refers to whether fair or unfair procedural rules are implemented in management decisions (e.g., hiring practices, salary increases, resource allocation, policy-making) within a group or an organization. A procedural rule that has received a great deal of empirical attention is that of voice versus no-voice (Brockner et al., 1998; De Cremer & Sedikides, 2008; Van den Bos, 1999). Procedures that grant members voice (i.e., opinion or input in group decision-making) are considered as fairer than procedures that deny members voice (Folger, 1977; Leventhal, 1980; Thibaut & Walker, 1975).

Some procedural fairness theories (Folger & Cropanzano, 2001; Lind, 2001; Van den Bos, Lind, & Wilke, 2001) postulate that information about procedural rules signals to members whether the group and, more generally, the broader societal context are fair, and whether, in turn, members should anticipate fair treatment. Procedural rules, then, such as voice/no-voice, have implications for judgments. At a minimum, voice would lead to stronger judgments of fairness than no-voice. Other procedural fairness theories follow a different tack (De Cremer & Tyler, 2005; Lind & Tyler, 1988; Tyler & Lind, 1992). They postulate that information about procedural rules signals to members whether the group values them and where the group positions them in the internal hierarchy (i.e., status). Procedural rules, then, such as voice/no-voice, would have implications for the extent to which members feel they belong to the group and identify with the group. At a minimum, voice would lead to higher group identification than no-voice.

There is, indeed, evidence that voice results in stronger fairness judgments

(Lind, Kanfer & Earley, 1990; Van den Bos, 1999; Van Prooijen, Karremans, & Beest, 2006) and higher group identification (McFarlin & Sweeney, 1992; Tyler, 1999; Tyler & Blader 2000) than no-voice. At the same time, though, another body of research suggests that procedural rules (a) do not always impact on fairness judgments or strength of group identification, (b) produce sometimes strong, sometimes weak effects, and (c) this inconsistency may depend on the use of divergent assessments of fairness and identification across studies, settings, and people (Blader, 2007; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Sedikides, Hart, & De Cremer, in press). To resolve this paradox and increase our understanding of when procedural rules will influence fairness judgments versus group identification, we propose to look at the motive of uncertainty reduction (Hogg, 2001; McGregor, 2003; Sedikides & Strube, 1997). Building on the assertion that procedural information is more impactful when uncertainty is high (Sedikides, De Cremer, Hart, & Brebels, in press; Van den Bos & Lind, 2002), we suggest that uncertainty can take distinct forms, which in turn will impact differentially on fairness judgment and group identification.

#### *The Role of Uncertainty in Procedural Fairness*

The social environment can be an uncertain place. Group or organizational members are not always able to predict how fellow members will argue, challenge norms of conduct, or act. To cope with this uncertainty, groups operate on the basis of mutually agreed upon rules or procedures. The relation between uncertainty and organizational procedures was introduced by the uncertainty management model (Van den Bos & Lind, 2002). According to this model, members use information about organizational procedures to reduce uncertainty. It follows that the more salient uncertainty is, the stronger the impact of procedural rules (i.e., voice vs. no-voice)

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will be on members' responses. This hypothesis has received considerable empirical support (De Cremer & Sedikides, 2005; Diekmann, Barsness, & Sondak, 2004; Van den Bos, 2001; Van den Bos, Poortvliet, Maas, Miedema, & van den Ham, 2005).

The relevant research, however, has linked uncertainty to a variety of dependent variables that differ in terms of their conceptual definition, susceptibility to various causal factors, and evident outcomes. It is, thus, unclear when uncertainty will impinge on what kind of variables, and, more specifically, which forms of uncertainty will impinge on what kind of variables. Van den Bos (2001) anticipated this issue when he stated that "all uncertainties are not the same and cannot be expected to have the same effects" (p. 940). Research, then, is needed to address which form of uncertainty will affect one type of responding (e.g., fairness judgments) versus another (e.g., group identification), as a function of variations in procedural fairness.

Uncertainty has been broadly defined as referring to "one's attitudes, beliefs, feelings, and perceptions, as well as ... relationship to other people" (Van den Bos et al., 2005, p. 93). This definition overlaps conceptually with the two kinds of information that procedural rules are assumed to communicate: information about the world as a fair place and information about one's sense of belongingness or social identity (De Cremer & Tyler, 2005; Folger & Cropanzano, 2001; Lind, 2001; Lind & Tyler, 1988; Tyler & Lind, 1992; Van den Bos, Lind, & Wilke, 2001). Building on this observation, we draw a distinction between general uncertainty and belongingness uncertainty. Furthermore, we hypothesize that general uncertainty will influence fairness judgments, whereas belongingness uncertainty will influence group identification. Below, we elaborate on this distinction and the rationale for the hypothesis.

Van den Bos (2001, p. 933) induced uncertainty by asking participants to describe “the emotions that the thought of you being uncertain arouses in you” and “what you think physically will happen to you as you feel uncertain.” (These instructions were adapted from terror management theory research: Arndt et al., 1999) This manipulation derives from a conceptualization of uncertainty in reference to one’s socio-cultural values, norms, or worldviews (Van den Bos et al., 2005). The manipulation, then, likely activates concerns about the nature or structure of one’s social environment or one’s proximal social environment (i.e., group or organization). We label this form of uncertainty *general uncertainty*. Superimposed to the general uncertainty manipulation is the introduction of procedural rules in terms of granting or denying voice. In this context, procedural rules will likely be interpreted or utilized for their informational value: Do they signify that the organization is fair or unfair? It follows that uncertainty concerns and procedural interpretations will interact to influence fairness judgments.

As stated previously, however, uncertainty can also be conceptualized in reference to one’s sense of belongingness. This, more specific, form of uncertainty, which we label *belongingness uncertainty*, could be (and will be in our research) operationalized by instructing participants to describe “the emotions that the thought of you being uncertain about whether you belong to a group of other people arouses in you” and “what you think physically will happen to you when you feel uncertain about whether you belong to a group of other people.” This manipulation likely activates concerns about one’s inclusionary status in the group or about the quality of one’s relationships with group members or other persons. Belongingness is a fundamental human motivation (Baumeister & Leary, 1995; Williams, 2001).



Furthermore, people use belongingness information (i.e., group inclusion or membership) to reduce uncertainty (Hogg, 2001). Superimposed to the belongingness uncertainty manipulation is the introduction of procedural rules. In this context, procedural rules will likely be interpreted or utilized for their belongingness value: Do they signify that the person belongs to the organization (i.e., granting of voice), thus prompting stronger identification with it? It follows that uncertainty concerns and procedural interpretations will interact to influence strength of group identification.

### Experiment 1

#### *Method*

*Participants and design.* Fifty-six Tilburg University undergraduates (34 females, 22 males;  $M_{\text{age}} = 22.30$  years,  $SD = 2.36$ ) were randomly assigned to a 2 (organizational procedure: voice, no-voice) x 2 (uncertainty form: general uncertainty, belongingness uncertainty) between-subjects factorial design.

*Experimental procedure.* Students were approached on campus by a research assistant and asked whether they would be willing to participate in a study conducted by the University on the topic of Bachelor-Master's degrees. Those who agreed were escorted to the laboratory, seated at separate tables, and given two booklets for two ostensibly unrelated studies. The first booklet contained the manipulation of uncertainty form (modeled after Van den Bos, 2001, p. 933). In the *general uncertainty* condition, participants responded to two open-ended questions: "Please briefly describe the emotions that the thought of you being uncertain in general arouses in you" and "Please write down, as specifically as you can, what you think physically will happen to you when you feel uncertain in general." In the *belongingness uncertainty* condition, participants responded to the following two open-ended questions: "Please briefly describe the emotions that the thought of you

being uncertain about whether you belong to a group of other people arouses in you” and “Please write down, as specifically as possible, what you think physically will happen to you when you feel uncertain about whether you belong to a group of other people.” Given that imagination scenaria involving valenced memories can influence mood (Sedikides, 1995), we asked participants to indicate how sad they felt (1 = *not at all*, 7 = *very much so*). An ANOVA yielded no significant mood effects for voice,  $F(1, 52) = .20, p < .66$ , uncertainty  $F(1, 52) = .20, p < .66$ , or the interaction,  $F(1, 52) = .04, p < .85$ .

The second booklet contained the organizational procedure manipulation (based on e.g. Brockner et al., 1998; Van den Bos Wilke, & Lind, 1998). Participants read an article that was actually published at the Tilburg University newspaper (*Univers*, February 2006). The article stated that the University Board was concerned about the organizational effectiveness of the Bachelor-Master program. That was a highly relevant topic for students. The program had only recently been introduced at European Universities, and students were still trying to familiarize themselves with the new academic system. In the *voice* condition, participants learned that the University was interested in student opinion and that they were given the opportunity to suggest changes that could improve the Bachelor-Master program. In the *no-voice* condition, participants learned that the University was not interested in student opinion and that they were not given the opportunity to suggest changes for the program; here, the booklet section titled “Student Opinion” was marked out with a red cross.

Next, participants completed the dependent measures. They responded to all questions on a scale ranging from 1 (*not at all*) to 7 (*very much so*). We checked for the effectiveness of the organizational procedure manipulation by asking participants

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“to what extent are you able to voice your opinions regarding the Bachelor-Master program?”. We assessed fairness judgments by asking participants “To what extent do you judge as fair the University’s procedure to gather information for the improvement of the Bachelor-Master program?” (based on Van den Bos, 1999, Experiment 2). We assessed group identification with two questions: “I identify strongly with Tilburg University” and “I feel part of Tilburg University” (after Brown, Condor, Mathews, Wade, & Williams, 1986). We combined responses to these two items to form a group identification score ( $r = .81, p < .001$ ). At the end of the experimental session, we debriefed and thanked participants.

### *Results and Discussion*

*Manipulation checks.* The organizational procedure manipulation was effective. Participants in the voice condition ( $M = 3.05, SD = 1.56$ ) reported that they were more able to voice their opinion than participants in the no-voice condition ( $M = 2.21, SD = 1.34$ ),  $F(1, 52) = 4.58, p < .05, \eta^2 = .08$ .<sup>1</sup>

To check for the effectiveness of the uncertainty form manipulation, we asked two coders who were unaware of experimental condition to rate independently (1 = *not at all* to 7 = *very much*) the extent to which participants’ responses reflected uncertainty in general (interrater reliability,  $r = .92, p < .001$ ) or uncertainty about belongingness (interrater reliability,  $r = .91, p < .001$ ). Participants listed more thoughts and feelings of uncertainty in general in the general uncertainty condition ( $M = 4.17, SD = 1.58$ ) than in the belongingness uncertainty condition ( $M = 1.90, SD = 0.83$ ),  $F(1, 52) = 44.24, p < .001, \eta^2 = .45$ . In addition, participants listed more thoughts and feelings of uncertainty about belongingness in the belongingness uncertainty condition ( $M = 3.46, SD = 2.23$ ) than in the general uncertainty condition

( $M = 1.48$ ,  $SD = 0.70$ ),  $F(1, 52) = 20.01$ ,  $p < .001$ ,  $\eta^2 = .26$ . We conclude that the uncertainty form manipulation was effective.

*Fairness judgments.* In line with the hypothesis, the interaction was significant,  $F(1, 52) = 4.87$ ,  $p < .05$ ,  $\eta^2 = .07$  (Table 1). Participants in the general uncertainty condition evaluated the procedure as fairer when they were given than denied voice,  $F(1, 52) = 19.10$ ,  $p < .001$ , whereas this effect was not obtained in the belongingness uncertainty condition,  $F(1, 52) = 1.18$ ,  $p < .29$ . In addition, the organizational procedure main effect was significant. Participants in the voice condition ( $M = 3.87$ ,  $SD = 0.70$ ) judged the procedure to be fairer than participants in the no-voice condition ( $M = 2.89$ ,  $SD = 1.10$ ),  $F(1, 52) = 16.67$ ,  $p < .001$ .

*Group identification.* In line with the hypothesis, the interaction was significant,  $F(1, 52) = 4.02$ ,  $p = .05$ ,  $\eta^2 = .06$  (Table 1). Participants in the belongingness uncertainty condition identified more strongly with the University when they were given than denied voice,  $F(1, 52) = 10.55$ ,  $p < .005$ , whereas this effect was not obtained in the general uncertainty condition,  $F(1, 52) = .12$ ,  $p < .73$ . In addition, the organizational procedure main effect was significant. Participants in the voice condition ( $M = 3.59$ ,  $SD = 1.34$ ) identified more strongly with the University than participants in the no-voice condition ( $M = 2.68$ ,  $SD = 1.43$ ),  $F(1, 52) = 6.28$ ,  $p < .001$ .

## Experiment 2

The results of Experiment 1 were consistent with the hypothesis. Participants in the general uncertainty condition judged the organizational procedure as fairer when they were granted than denied voice. However, participants in the belongingness uncertainty condition did not differ in their fairness judgments as a function of organizational procedure. On the other hand, belongingness uncertainty

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participants identified more strongly with their organization when they were granted than denied voice. However, general uncertainty participants did not differ in their strength of identification as a function of organizational procedure.

The concept of belongingness uncertainty, however, is not unitary.

Belongingness needs are reflected in one's desire to form or maintain social bonds. Importantly, these needs can be satisfied not only through affiliation with familiar others (e.g., family members, friends) but also through affiliation with strangers (e.g., interacting with a fan at a sporting event, starting a conversation with a pub patron) (Baumeister & Leary, 1995; Pöhlmann & Hannover, 2006). If so, what exactly drove the belongingness uncertainty findings in Experiment 1? Was it a circumscribed sense of belongingness (e.g., belongingness to family) or a global sense of belongingness (e.g., belongingness to strangers)?

The main objective of Experiment 2 was to clarify the concept of belongingness uncertainty and its link with the enacted organizational procedures. We induced general uncertainty, as in Experiment 1, for the purpose of replication, and we also induced family-belongingness uncertainty and stranger-belongingness uncertainty. Subsequently, we introduced the organizational procedure manipulation. Finally, we assessed fairness judgments and group identification.

In particular, Experiment 2 aimed to (a) decompose the belongingness uncertainty concept into family-belongingness and stranger-belongingness uncertainty, and (b) examine whether these two forms of belongingness (compared to general) uncertainty yield different procedural fairness effects. Are the belongingness uncertainty findings of Experiment 1 likely due to family-belongingness uncertainty? If so, participants in the family-belongingness (rather than general or stranger-belongingness) uncertainty condition will identify more strongly with their

organization when they are granted than denied voice. Alternatively, are the

belongingness uncertainty findings of Experiment 1 likely due to stranger-belongingness uncertainty? If so, participants in the stranger-belongingness (rather than general or family-belongingness) uncertainty condition will identify more strongly with their organization when they are granted than denied voice.

### *Method*

*Participants and design.* One hundred fourteen Tilburg University undergraduates (58 females, 51 males, 5 with undeclared gender;  $M_{\text{age}} = 21.78$  years,  $SD = 2.37$ ) were randomly assigned to a 2 (organizational procedure: voice, no-voice) x 3 (uncertainty form: general, family, stranger) between-subjects factorial design.

*Experimental procedure.* The procedure was similar to that of Experiment 1, with a few notable exceptions. The ostensible first study contained the uncertainty form manipulation. The *general uncertainty* condition was identical to the one used in Experiment 1. The *family-* and *stranger-belongingness* uncertainty conditions involved participants responding to the following two open-ended questions: “Please briefly describe the emotions that the thought of you being uncertain about your sense of belongingness in a relationship with family members {with strangers} arouses in you” and “Please write down, as specifically as possible, what you think physically will happen to you as you feel uncertain about your sense of belongingness in a relationship with family members {with strangers}.”

The ostensible second study included the organizational procedure manipulation. Participants read an article that was ostensibly published at the Tilburg University newspaper (i.e., *Univers*). The article announced that the University Board was considering the possibility of making student attendance to course-specific workgroups compulsory. In the *voice* condition, participants were given the

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opportunity to express their opinion about this initiative and suggest changes. In the *no-voice* condition, participants were not given this opportunity; instead, the “Student Opinion” section of the booklet was marked out with a red cross.

Subsequently, participants completed the dependent measures on a scale ranging from 1 (*not at all*) to 7 (*very much so*). We examined the effectiveness of the organizational procedure manipulation by asking participants “to what extent are you able to voice your opinion concerning the new initiative of the University Board?”. We assessed fairness judgments by asking participants: “To what extent do you judge as fair the University’s procedure to gather information about making workshop attendance compulsory?” (based on Van den Bos, 1999). Finally, we assessed group identification with two questions: “I identify strongly with Tilburg University” and “I find it important to belong to Tilburg University” (Brown et al., 1986). We combined the two items to form an average group identification score ( $r = .66, p < .001$ ). Debriefing concluded the experimental session.

### *Results and Discussion*

*Manipulation checks.* The organizational procedure manipulation was effective. Participants in the voice condition ( $M = 3.36, SD = 1.71$ ) reported that they were more able to express their opinion than those in the no-voice condition ( $M = 2.32, SD = 2.08$ ),  $F(1, 108) = 7.68, p < .01, \eta^2 = .06$ .

To check for the effectiveness of the uncertainty form manipulation, two coders independently rated (1 = *not at all*, 7 = *very much*) the extent to which participants’ written protocols referred to uncertainty in general (interrater reliability,  $r = .96, p < .001$ ), uncertainty of family belongingness (interrater reliability,  $r = .95, p < .001$ ), and uncertainty of stranger belongingness (interrater reliability,  $r = .97, p < .001$ ). First, participants listed more thoughts and feelings of uncertainty in general in

the general uncertainty condition ( $M = 5.26$ ,  $SD = 1.59$ ) than either the family-belongingness uncertainty condition ( $M = 1.16$ ,  $SD = 0.38$ ,  $p < .001$ ) or the stranger-belongingness uncertainty condition ( $M = 1.35$ ,  $SD = 0.71$ ,  $p < .001$ ),  $F(2, 108) = 175.03$ ,  $p < .001$ ,  $\eta^2 = .69$ . (The latter two conditions do not differ significantly,  $p > .38$ .) In addition, participants listed more thoughts and feelings of uncertainty about belonging to a family member in the family-belongingness uncertainty condition ( $M = 4.88$ ,  $SD = 2.43$ ) than either the stranger-belongingness uncertainty condition ( $M = 1.15$ ,  $SD = 0.37$ ,  $p < .001$ ) or the general uncertainty condition ( $M = 1.25$ ,  $SD = 0.73$ ,  $p < .001$ ),  $F(2, 108) = 74.13$ ,  $p < .001$ ,  $\eta^2 = .56$ . (The latter two conditions do not differ significantly,  $p > .77$ .) Finally, participants listed more thoughts and feelings of uncertainty about belonging to a stranger in the stranger-belongingness uncertainty condition ( $M = 5.66$ ,  $SD = 1.97$ ) than either the family-belongingness uncertainty condition ( $M = 1.41$ ,  $SD = 0.93$ ,  $p < .001$ ) or the general uncertainty condition ( $M = 2.69$ ,  $SD = 0.71$ ,  $p < .001$ ),  $F(2, 108) = 66.10$ ,  $p < .001$ ,  $\eta^2 = .54$ . (The latter two conditions also differed significantly,  $p < .001$ .) We conclude that the uncertainty form manipulation was effective.

*Fairness judgments.* The interaction was significant,  $F(2, 108) = 3.47$ ,  $p < .05$ ,  $\eta^2 = .06$  (Table 2). Replicating the corresponding pattern of Experiment 1, in the general uncertainty condition, participants who were granted voice evaluated the procedure as fairer compared to those who were denied voice,  $F(1, 108) = 10.01$ ,  $p < .001$ . This effect, however, was not significant in the family-belongingness uncertainty condition,  $F(1, 108) = .08$ ,  $p > .77$ , or the stranger-belongingness uncertainty condition,  $F(1, 108) = .09$ ,  $p > .76$ .

*Group identification.* The interaction was significant,  $F(2, 108) = 2.77$ ,  $p = .06$ ,  $\eta^2 = .05$  (Table 2). In the family-belongingness uncertainty condition, participants



who were granted voice displayed stronger identification with their University

compared to participants who were denied voice,  $F(1, 108) = 4.55, p < .05$ . This effect, however, was not significant in the stranger-belongingness uncertainty condition,  $F(1, 108) = .01, p > .91$ . This effect was not significant in the general uncertainty condition either,  $F(1, 108) = 1.27, p > .26$ , thus replicating the corresponding pattern of Experiment 1. In sum, it is family-belongingness uncertainty, rather than stranger-belongingness uncertainty, that drives group identification responses.

### General Discussion

Organizational procedures provide at least two types of information to members: whether the organization is fair or unfair, and whether the group values them or not. As such, manipulations of procedural rules (e.g., granting or denial of voice) will influence fairness judgments and group identification. When members are granted (rather than denied) voice, they will judge procedures as fairer and identify more strongly with the organization. This pattern, though, has not been reliably obtained (Blader, 2007; Colquitt et al., 2001). To address this inconsistency, we explored the role of uncertainty in procedural fairness effects.

Group members rely on organizational procedures to reduce their uncertainty. As such, procedural information will be more impactful when members' uncertainty is high (Sedikides, De Cremer, Hart, & Brebels, in press; Van den Bos & Lind, 2002). We initially distinguished between two types of uncertainty and then postulated that they will have distinct procedural fairness effects: they will affect differently fairness judgment and group identification. In particular, we distinguished between general and belongingness uncertainty. The source of general uncertainty can be attitudes, beliefs, feelings, perceptions, and social relations (Van den Bos et al., 2005). General

uncertainty, then, pertains to whether one's social world is a fair place. The source of belongingness uncertainty, however, is localized to a group or person (familiar or unfamiliar), and this form of uncertainty pertains to whether one is accepted by that group or person.

What will be the response consequences of general versus belongingness uncertainty when information about procedural rules is available? How will this information be utilized? We theorized that participants in a state of general uncertainty will glean this information for its fairness value, a process that will be manifested in terms of fairness judgments. However, participants in a state of belongingness uncertainty will glean this information for its inclusionary value, a process that will be manifested in terms of strength of identification with the organization. Hence, we hypothesize that general uncertainty will interact with organizational procedure to influence fairness judgments, whereas belongingness uncertainty will interact with organizational procedure to influence group identification.

We tested this hypothesis in Experiment 1. We manipulated uncertainty (general vs. belongingness), then manipulated the enactment of procedure (i.e., voice vs. no-voice), and subsequently assessed fairness judgments and group identification. We found that, in the case of general uncertainty, organizational procedures influenced fairness judgments: Participants judged the procedure as fairer when they were granted than denied voice. However, variations in organizational procedures did not influence group identification. We obtained the mirror image of this pattern in the case of belongingness uncertainty. Here, participants identified more strongly with their organization when they were granted than denied voice. However, variations in organizational procedure did not influence fairness judgments.

(e.g., family members) or by forming bonds with strangers (Baumeister & Leary, 1995; Pöhlmann & Hannover, 2006). We wondered which form of belongingness uncertainty drove these findings, and we conducted Experiment 2 to find out. We first induced general uncertainty (as in Experiment 1), uncertainty of belongingness to a relationship with a family member, and uncertainty of belongingness to a relationship with a stranger. Then we manipulated organizational procedures (voice vs. no-voice), and we subsequently assessed fairness judgments and group identification. The results were revealing. As in Experiment 1, general uncertainty participants judged the organizational procedure as fairer when they were granted than denied voice, but a null effect was obtained in the case of group identification. Importantly, this pattern was reversed for family-belongingness uncertainty. Here, participants identified more strongly with their organization when they were granted than denied voice, and a null effect was obtained for fairness judgments. Stranger-belongingness uncertainty participants evidenced null effects for both fairness judgments and group identification. Therefore, the belongingness uncertainty results of Experiment 1 were likely due to family-belongingness rather than stranger-belongingness uncertainty.

The discrepancy between family-belongingness and stranger-belongingness uncertainty is of particular interest. When people experience uncertainty about already formed affiliative bonds (i.e., the family), they respond to variations in organizational procedure by momentarily strengthening their connection or identification with another already formed target: their organization or group. In that sense, participants use the ingroup as a psychological resource (Correll & Park, 2005), seeking affiliative comfort. However, uncertainty about new affiliations (i.e., relationship with a stranger) appears to be inconsequential as far as responses to variations in

organizational procedure are concerned: participants do not resort to the ingroup for affiliative comfort.

Our findings have implications for organizational membership and policy. Members of an organization differ in terms of seniority (Moreland & Levine, 2002). Newcomers may be relatively prone to belongingness uncertainty, whereas senior members may be relatively prone to general uncertainty. It follows that procedural enactment will affect these two types of employees differently. It will impact on newcomers' organizational identification and on senior members' fairness judgment. From a managerial perspective, the former would be more receptive to reassurance about their value as group members and acceptance from the group, whereas the latter would be more receptive to well-defined and consistently applied organizational procedure.

In addition, our findings have implications for procedural fairness models, such as the self-based model of cooperation (De Cremer & Tyler, 2005), the group-value model (Lind & Tyler, 1988), the relational model of authority (Tyler & Lind, 1992), and the group-engagement model (Tyler & Blader, 2000). Variations in procedures interacted in complex ways with uncertainty, with different forms of uncertainty (e.g., general vs. belongingness) influencing different types of responses (i.e., fairness judgments vs. group identification, respectively). It follows that procedural fairness models would need to take into account and distinguish better both among different forms of uncertainty and among different kinds of responses.

To conclude, different forms of uncertainty account for different organizational procedure effects: General uncertainty is linked with fairness judgments, whereas belongingness (and, in particular, family-belongingness) uncertainty is linked with group identification. Future research would need to

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replicate these findings with different operationalizations of organizational procedures

(e.g., consistency, correctability, ethicality, accuracy; Leventhal, 1980). Future research will also do well to try to extend the present findings by examining whether general uncertainty influences not only procedural fairness judgments but also other types of fairness (i.e., distributive or outcome fairness), and whether belongingness (or family-belongingness) uncertainty influences group identification not only as a function of organizational procedure but also as a function of distributive fairness (Okimoto, in press). Regardless, research on the link between uncertainty responsiveness to organizational procedure has a promising future.

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<sup>1</sup>In multifactor designs, SPSS generates partial eta-squares that are upwardly biased estimates of effect sizes compared to the classical eta-squares. Following recommendations by Levine and Hullett (2002), we calculated and reported the classical eta-square in both experiments.

ACCEPTED MANUSCRIPT

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## ACCEPTED MANUSCRIPT

Table 1

*Means and Standard Deviations of Fairness Judgments and Group Identification as a Function of Uncertainty Form and Procedure in Experiment 1*

| Dependent<br>measure    | Procedure | Uncertainty Form |           |               |           |
|-------------------------|-----------|------------------|-----------|---------------|-----------|
|                         |           | General          |           | Belongingness |           |
|                         |           | <i>M</i>         | <i>SD</i> | <i>M</i>      | <i>SD</i> |
| Fairness<br>judgments   | Voice     | 4.00             | 0.58      | 3.73          | 0.80      |
|                         | No Voice  | 2.50             | 1.16      | 3.29          | 0.91      |
| Group<br>identification | Voice     | 3.04             | 1.28      | 4.13          | 1.21      |
|                         | No Voice  | 2.86             | 1.40      | 2.50          | 1.49      |

*Note.* Higher scores indicate higher fairness judgments and identification.

## ACCEPTED MANUSCRIPT

Table 2

*Means and Standard Deviations of Fairness Judgments and Group Identification as a Function of Uncertainty Form and Procedure in Experiment 2*

| Dependent<br>measure    | Procedure | Uncertainty Form |           |          |           |          |           |
|-------------------------|-----------|------------------|-----------|----------|-----------|----------|-----------|
|                         |           | General          |           | Family   |           | Stranger |           |
|                         |           | <i>M</i>         | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Fairness<br>judgments   | Voice     | 4.50             | 0.94      | 4.14     | 1.28      | 3.38     | 1.63      |
|                         | No Voice  | 3.04             | 1.40      | 4.00     | 1.35      | 3.25     | 1.52      |
| Group<br>identification | Voice     | 3.54             | 1.67      | 4.29     | 1.15      | 3.55     | 1.47      |
|                         | No Voice  | 4.07             | 1.24      | 3.17     | 1.47      | 3.50     | 1.48      |

*Note.* Higher scores indicate higher fairness judgments and identification.