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Procedural Justice and the Hedonic Principle: How Approach Versus Avoidance Motivation Influences the Psychology of Voice

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The authors investigate the relation between the hedonic principle (people's motivations to approach pleasure and to avoid pain) and procedural justice. They explore whether approach or avoidance motivation increases the effect that people feel they were treated more fairly following procedures that do versus do not allow them an opportunity to voice their opinion. Experiments 1 and 2 reveal that these procedures influence procedural justice judgments more strongly when people conduct approach motor action (arm flexion) than when they conduct avoidance motor action (arm extension). Experiment 3 indicates that individual-difference measures of participants' approach motivations predicted procedural justice judgments following voice versus no-voice procedures. The authors conclude that people's motivational orientations stimulate their fairness-based reactions to voice procedures.

Keywords: procedural justice, voice, approach–avoidance, hedonic motivation

Social justice is a key issue in understanding human behavior: People are influenced profoundly by the extent to which they perceive social situations as fair or unfair. For example, people display signs of appreciation when they believe that justice has been done, but acts of injustice lead people to show aversive reactions, such as feelings of anger, fear, and disgust (Folger & Cropanzano, 1998; Lind & Tyler, 1988; Tyler & Lind, 1992). It has even been suggested that social justice may be one of the most important norms and values in human society (Folger, 1984). A conceptualization of social justice that has been extensively studied by social psychologists is the extent to which people perceive decision-making procedures as fair, a conceptualization commonly referred to as *procedural justice* (Thibaut & Walker, 1975). Procedural justice has been found to influence a wide range of people's perceptions and behaviors in various social situations (for overviews, see Brockner & Wiesenfeld, 1996; Cropanzano, Byrne, Bobocel, & Rupp, 2001; Folger & Cropanzano, 1998; Lind & Tyler, 1988; Tyler & Blader, 2000; Tyler & Lind, 1992; Van den Bos & Lind, 2002; Van Prooijen, Van den Bos, & Wilke, 2004b).

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An illustration of a typical procedural justice phenomenon is the finding that people evaluate decision-making procedures that allow them an opportunity to voice their opinions to be more fair than procedures that do not allow them such an opportunity. This finding is referred to as the *voice effect* (Folger, 1977). Besides having a strong influence on procedural justice judgments, voice procedures have been found to exert positive effects on many of people's other perceptions and behaviors. For example, voice procedures (when compared with no-voice procedures) have been found to increase positive affect, decrease negative affect, increase people's willingness to accept decisions, improve relations with authorities, and improve task performance (Folger, Rosenfield, Grove, & Corkran, 1979; see also Brockner et al., 1998; Greenberg & Folger, 1983; Lind, Kanfer, & Earley, 1990; Tyler & Lind, 1992; Van den Bos, 2001, 2003; Van den Bos, Wilke, Lind, & Vermunt, 1998; Van Prooijen, Van den Bos, & Wilke, 2002, 2004a, 2005). People's more positive responses to the granting as opposed to the denial of voice have been described as one of the most robust findings in procedural justice literature, and evidence for these voice effects has been found in both applied and experimental settings (e.g., Brockner et al., 1998; Lind et al., 1990; Tyler, 1987; Van den Bos & Van Prooijen, 2001).

In many social situations, voice versus no-voice procedures precede decisions about positive outcomes (i.e., gains). In correspondence with this, a substantial number of procedural justice studies have investigated the voice effect in a gain-framed context. For example, recipients in numerous empirical procedural justice studies received voice or no-voice procedures about decisions regarding pay distributions (Folger, 1977; Van den Bos, 1999; Van den Bos & Van Prooijen, 2001; Van Prooijen et al., 2004a), lottery tickets (Van den Bos, 2001, 2003; Van den Bos et al., 1997, 1998; Van Prooijen et al., 2005), student grades (Tyler, Rasinski, & Spodick, 1985; Study 2), or goal-setting opportunities (Lind et al.,

1990; Van Prooijen et al., 2004a). As a consequence, influential procedural justice theories are to a substantial extent based on gain-framed social situations (Thibaut & Walker, 1975; Tyler & Lind, 1992). Although we wish to emphasize that procedural justice phenomena are important in loss-framed situations as well (e.g., Brockner et al., 1998; Thibaut & Walker, 1975), these considerations suggest that gain-framed situations provide a good point of departure to study voice effects.

Our focus on gains was partially inspired by early instrumental explanations of why people attach importance to voice procedures. These instrumental explanations were based on research findings that people prefer procedures that allow them a substantial amount of process control, that is, control over the manner in which decisions are made (Thibaut & Walker, 1975). According to instrumental explanations, one of the main reasons people desire process control is "because it enables them to obtain predictable and satisfactory outcomes" (Houlden, LaTour, Walker, & Thibaut, 1978, p. 16). As such, instrumental explanations suggest that people value voice procedures because they associate such procedures with obtaining positive outcomes.

Besides instrumental explanations, in the 1980s procedural justice research indicated that people also value voice procedures for noninstrumental reasons (e.g., Lind et al., 1990; Tyler, 1987; Tyler et al., 1985). These noninstrumental concerns are highlighted in the relational model of authority (Tyler & Lind, 1992), which asserts that people value voice procedures because such procedures have positive implications for their sense of self-worth. More specifically, voice procedures are usually provided by group authorities, and these group authorities are generally perceived as representative for the entire group. An authority that uses fair procedures therefore communicates that recipients are respected members of their community and that they are included in social groups. Unfair procedures, however, communicate that recipients are disrespected by their community and that they are excluded from social groups (Lind, 2001; Lind & Tyler, 1988; Tyler, 1987, 1989; Tyler & Lind, 1992; Van Prooijen et al., 2004a, 2004b). The relational model thus proposes that people attach importance to voice procedures because they associate such procedures with obtaining important relational benefits, such as being respected and included in valuable social groups.

Both instrumental and noninstrumental explanations of voice effects have contributed in important ways to scientists' understanding of when people feel treated fairly or unfairly by decision-making authorities. Yet in the current article we suggest that both perspectives offer an incomplete account of the motivational nature of the voice effect: Do people value voice procedures because these procedures increase their chances of obtaining important instrumental or relational benefits, such as positive outcomes or a sense of inclusion (i.e., approach motivated)? Or do people value voice procedures because these procedures imply the avoidance of detrimental instrumental or relational issues, such as being denied valuable outcomes or being excluded from social groups (i.e., avoidance motivated)? Although the described theoretical perspectives seem to assume the first possibility, empirical research has ignored the question of whether voice effects are explained by approach or avoidance motivation. As a consequence, it is as yet unclear why people are motivated to have voice in a decision-making process, which constitutes a void in scientific knowledge on procedural justice. In the current research, we focus on the question of whether the voice effect is driven by people's approach or avoidance motivations. As such, the current research is designed to make a novel contribution to the procedural justice field by investigating the underlying motivational principles that explain people's fairness-based reactions to voice and no-voice procedures, thus specifying and extending existing procedural justice theories. To explore the motivational nature of the voice effect, we empirically tested the theoretical assumption that in a gain-framed context, the voice effect is driven by people's approach motivations, and we contrasted this proposition with the alternative possibility that the voice effect is driven by people's avoidance motivations.

The Current Research

People's motivations to approach pleasure and to avoid pain are commonly referred to as the *hedonic principle* (Förster, Higgins, & Idson, 1998; Higgins, 1997). Although the hedonic principle has been ignored by empirical procedural justice research, it is central in other domains in social psychology. It has even been proposed that "the distinction between approach and avoidance motivation is fundamental and integral to the study of affect, cognition, and behavior" (Elliot & Thrash, 2002, p. 804). To investigate how the hedonic principle influences the voice effect, we base our line of reasoning on the idea that people's motivational state stimulates their sensitivity to congruent social information (Higgins, 1997, 2000). To illuminate this point, it is likely that people who are in an avoidance motivational state are particularly sensitive to cues in their social environment that they associate with the avoidance of undesirable issues. As a consequence, people respond positively when they are successful in avoiding negative stimuli and respond negatively when they are unable to avoid negative stimuli. A similar process is likely to occur among people who are in an approach motivational state: People who are in such a state are particularly sensitive to cues in their social environment that they associate with the acquisition of desirable issues. As a consequence, people respond positively when they obtain desired benefits and respond negatively when they are denied these benefits. Thus, approach and avoidance motivation may direct people's attention to different types of social information.

This causal influence of approach and avoidance motivation on the type of information that people focus on has implications for how people respond to decision-making procedures. In correspondence with previous theorizing, we propose that people associate voice procedures with the acquisition of instrumental and relational benefits (Lind & Tyler, 1988; Thibaut & Walker, 1975; Tyler & Blader, 2003; Tyler & Lind, 1992). It therefore stands to reason that especially those people who are in an approach motivational state will pay attention to the extent to which they regard these decision-making procedures as fair or unfair. As a consequence, approach motivation is likely to stimulate people's fairness evaluations following voice and no-voice procedures. According to this line of reasoning, it would be expected that people's procedural justice judgments are particularly sensitive to the granting versus denial of voice when they are in an approach motivational state, as compared with when they are in an avoidance motivational state. The alternative possibility, however, is that people associate voice procedures with the avoidance of undesirable issues (e.g., being denied valuable outcomes, being excluded

from social groups). If this were the case, then it would be predicted that avoidance motivation stimulates people's fairness evaluations following voice and no-voice procedures. According to this alternative line of reasoning, it would be expected that people's procedural justice judgments are particularly sensitive to the granting versus denial of voice when they are in an avoidance motivational state as opposed to an approach motivational state.

In the current research, we tested these opposing ideas in a series of three experiments. In Experiments 1 and 2, we tested our hypotheses by means of orthogonal manipulations of approach versus avoidance motor action. Furthermore, in Experiment 1 we manipulated voice versus no-voice procedures in a scenario, whereas in Experiment 2 participants directly experienced variations in voice versus no-voice procedures. In Experiment 3, we extended our research by measuring people's approach and avoidance motivations as chronic individual-difference measures, followed by a direct manipulation of voice versus no-voice procedures. The main dependent variables in all three experiments were judgments that are typically assessed in procedural justice research: participants' procedural justice judgments—that is, items referring to the extent to which participants believed that they were fairly treated by decision-making authorities (Lind & Tyler, 1988; Tyler & Lind, 1992).

Experiment 1

How can people's approach and avoidance motivations be manipulated in an experimental setting? Previous research has indicated that people's approach versus avoidance motivations are reflected in their automatic social–physiological behaviors, such as their motor actions (e.g., Chen & Bargh, 1999; Förster, 2003; Förster & Strack, 1996). For example, Chen and Bargh (1999) found that it is easier for people to pull positive items toward the body, whereas it is easier for people to push negative items away from the body. The arm movement of pulling items toward the body ("approach") is referred to as *arm flexion*; the arm movement of pushing items away from the body ("avoidance") is referred to as *arm extension*.

When induced as an independent variable, arm flexion and extension produce bodily feedback that activates people's approach and avoidance motivational orientations outside of their conscious awareness (e.g., Cacioppo, Priester, & Berntson, 1993; Förster, 2003; Friedman & Förster, 2000, 2002; Priester, Cacioppo, & Petty, 1996). According to Cacioppo et al. (1993), the reason for this can be found in classical conditioning principles: During one's lifetime, muscle stimulations produced by arm flexion are most closely associated with the consumption or acquisition of desired stimuli (approach), whereas muscle stimulations produced by arm extension are most closely coupled with withdrawal or rejection of undesired stimuli (avoidance). On the basis of this line of reasoning, Cacioppo and his colleagues had participants either place their hand below a table and press upward (arm flexion) or place their hand on top of a table and press downward (arm extension). The results revealed that participants evaluated Chinese ideographs more positively in the arm flexion condition than in the arm extension condition. Furthermore, the motor action manipulation was cognitively associated with participants' motivational orientations (approach vs. avoidance), not with their emotional orientations (pleasant vs. unpleasant). Moreover, empirical data of six experiments ruled out alternative explanations, such as self-perception and demand characteristics. The research by Cacioppo and his colleagues is important because it indicated that nonaffective bodily feedback, as produced by arm flexion versus extension, can produce approach versus avoidance motivations that shape attitude development (see also Priester et al., 1996).

The line of reasoning laid out in this article leads us to expect that contractions of the flexion versus extension muscles influence people's justice-based reactions to voice versus no-voice procedures. After all, if people value opportunities to voice their opinions predominantly because they associate such procedures with the acquisition of instrumental or relational benefits, then they should be particularly sensitive to the granting versus denial of voice when they are in an approach motivational state (as produced by arm flexion) as compared with when they are in an avoidance motivational state (as produced by arm extension). On the basis of this line of reasoning, it can be predicted that people's procedural justice judgments are influenced more strongly by voice as opposed to no-voice procedures when they flex their arms than when they extend their arms. Alternatively, if people value opportunities to voice their opinions predominantly because they associate such procedures with the avoidance of undesirable instrumental or relational issues, then they should be particularly sensitive to the granting versus denial of voice when they are in an avoidance motivational state (as produced by arm extension) as compared with when they are in an approach motivational state (as produced by arm flexion). The alternative prediction would then be that people's procedural justice judgments are influenced more strongly by voice as opposed to no-voice procedures when they extend their arms than when they flex their arms.

Method

Participants and design. Participants were assigned randomly to conditions of a 2 (motor action: arm flexion vs. arm extension) × 2 (procedure: voice vs. no-voice) factorial design. A total of 82 participants (31 men and 51 women, varying in age from 17 to 48 years) were recruited in the restaurant of the Free University Amsterdam. The experiment was preceded by other, unrelated studies. The studies lasted a total of 45 min. Participants engaged voluntarily in all of the experiments and were paid 5 euros (U.S.$6.25).

Procedure. Upon entry in the laboratory, participants were led to separate individual cubicles. In the cubicles, participants found computer equipment, which was used to present the stimulus information and to register the data. The experiment was introduced as a study on how people respond to social situations if they simultaneously exert a slight physical effort. We then manipulated motor action: Participants in the arm flexion condition were asked to put the palm of one of their hands under the table and press upward, whereas participants in the arm extension condition were asked to put the palm of one of their hands on the table and press downward. Participants in both conditions were then asked to maintain a slight pressure against the table during the entire experiment and to work through the stimulus information with their one free hand using the computer mouse and keyboard.

Participants were then presented with the following situation:

> Imagine that you have had a summer job in a company. The company has made good business in recent times. Because of a number of financial windfalls, the management has decided to give every employee a once-only financial bonus. These bonuses will be divided by every employee's direct supervisor. Thus, your personal supervisor

during your summer job will decide what financial bonus you will receive.

We then manipulated procedure:

Your direct supervisor gives you [*voice/no voice*] about what bonus you think that you should receive. Eventually, your supervisor decides to give you a bonus of 50 euros.

After this, participants were asked to answer questions that pertained to the dependent variables. To measure procedural justice, we asked the following three questions: "How fair was the way you were treated by your supervisor?" (1 = *very unfair*, 7 = *very fair*), "How just was the way you were treated by your supervisor?" (1 = *very unjust*, 7 = *very just*), and "How appropriate was the way you were treated by your supervisor?" (1 = *very inappropriate*, 7 = *very appropriate*). These three items were averaged into a reliable procedural justice scale (α = .94). We then asked participants how annoying and how physically strenuous it was to press their hand against the table, and how much physical effort it took to press their hand against the table (1 = *not at all*, 7 = *very much*). Finally, we asked participants to indicate how they were pressing their hand against the table (1 = *pressing upward*, 2 = *pressing downward*, 3 = *not pressing*) and whether they used their left or right hand to press the table. After this, participants were told that they could stop exerting pressure against the table. Participants were fully debriefed, thanked, and paid for their participation.

Results

A total of 5 participants indicated that they were not pressing their hand against the table in the correct way during the experiment. These participants were deleted from further analyses. Of the remaining 77 participants, 76 indicated that they had used their left hand to press against the table. One male participant indicated that he had used his right hand to press the table, and this participant was included in the analyses (results were similar when this participant was excluded). Unless noted explicitly, participants' gender did not show significant effects on the variables analyzed below and was excluded as a factor in the reported analyses.

Physical discomfort. A 2 × 2 multivariate analysis of variance (MANOVA) did not show any significant effects on either the multivariate or univariate level on the questions concerning how annoying and how physically strenuous it was for participants to press their hand against the table, and how much physical effort it took (for annoyance, overall $M = 4.48$, $SD = 1.83$; for strenuousness, overall $M = 3.71$, $SD = 1.61$; for physical effort, overall $M = 3.26$, $SD = 2.70$). When included in the analyses, gender showed a significant univariate main effect on strenuousness, $F(1, 69) = 6.46$, $p < .02$. Women found it more strenuous to press their hand against the table ($M = 4.06$, $SD = 1.58$) than men ($M = 3.14$, $SD = 1.55$). However, this main effect was independent from the experimental conditions and was nonsignificant on the multivariate level. More important, these results confirmed that participants in the various conditions did not differ significantly in their reported physical discomfort as a result of their motor action. Physical discomfort produced by motor action therefore cannot explain the results presented here.

Procedural justice judgments. The means and standard deviations of participants' procedural justice judgments are displayed in Table 1. A 2 × 2 analysis of variance (ANOVA) on procedural justice judgments revealed a significant main effect of procedure, $F(1, 73) = 22.00$, $p < .001$. More important, the results yielded the predicted interaction, $F(1, 73) = 6.39$, $p < .02$. Simple main effect analyses indicated that the procedure manipulation exerted a significant effect on procedural justice judgments in the arm flexion condition, $F(1, 73) = 25.73$, $p < .001$, but not in the arm extension condition, $F(1, 73) = 2.32$, $p = .13$. These results corroborate the hypothesis that participants are more strongly influenced by voice procedures if they conduct approach motor action (arm flexion) than if they conduct avoidance motor action (arm extension).

Table 1
Means and Standard Deviations of Participants' Procedural Justice Judgments as a Function of Motor Action and Procedure (Experiment 1)

	Motor action			
	Arm flexion		Arm extension	
Procedure	*M*	*SD*	*M*	*SD*
Voice	5.91	0.86	4.75	1.54
No-voice	3.68	1.40	4.09	1.47

Note. Higher means indicate more positive procedural justice judgments.

Further, the motor action simple main effect was significant in the voice condition, $F(1, 73) = 6.27$, $p < .02$, but nonsignificant in the no-voice condition, $F(1, 73) = 1.23$, *ns*. Although approach motivation can elicit both positive and negative responses (i.e., by obtaining vs. not obtaining positive stimuli; Higgins, 1997), in the current experiment approach motor action stimulated participants' positive responses to voice procedures, not their negative responses to no-voice procedures. We revisit this finding in the General Discussion.

Discussion

The results of Experiment 1 indicate that participants' procedural justice judgments were influenced more strongly by voice as opposed to no-voice procedures when they flexed their arms than when they extended their arms. This suggests that participants who conducted approach motor action were more sensitive to the procedure manipulation than participants who conducted avoidance motor action. In correspondence with our analysis of previous procedural justice research, the findings obtained in Experiment 1 support the idea that people's fairness-based responses to voice as opposed to no-voice procedures are primarily driven by their approach motivations.

Before drawing strong conclusions, it is important to replicate and extend these results. After all, in Experiment 1 participants responded to voice as opposed to no-voice procedures in a hypothetical situation. From the results of Experiment 1 alone, we do not know how arm flexion and extension influence people's procedural justice judgments and satisfaction ratings if they directly experience variations in voice procedures. We therefore tested our hypotheses again in an experiment in which participants directly experienced a voice or a no-voice procedure.

Experiment 2

In Experiment 2, we tried to replicate and extend the findings of Experiment 1. In this experiment we made a number of modifica-

tions to our stimulus materials. As a first modification, in Experiment 2 we added a third condition to the motor action manipulation: a control condition in which participants were not exerting any flexion or extension pressure. It was important to do so in order to get an indication of whether arm flexion increases the strength of participants' reactions to procedures or, alternatively, arm extension decreases the strength of participants' reactions to procedures. On the basis of our line of reasoning in the introduction, we expected that approach motor action (arm flexion) would enhance the strength of the voice effect. After all, our line of reasoning implies that approach motivation increases people's sensitivity to decision-making procedures.

As a second modification, we adjusted the motor action manipulation: Participants either flexed or extended their arm muscles for 5 min while simultaneously conducting tasks, ostensibly to create an additional difficulty in participants' task performance. After these 5 min, participants stopped exerting flexion or extension pressure, before they encountered the procedure manipulation or the dependent variables. We reasoned that if bodily feedback produced by contraction of the flexion or extension muscles activates people's approach versus avoidance tendencies, then these tendencies should also be more accessible during the immediate relaxation period. This delayed induction of the procedure manipulation following the motor action manipulation should shed light on the time span within which nonaffective bodily feedback produces effects on people's reactions to decision-making procedures.

As a third modification to our stimulus materials, participants directly experienced a voice or a no-voice procedure: Participants were told that a number of lottery tickets would be divided among all participants. They then received a message from the experimenter stating that they were either granted or denied voice about the division of the lottery tickets. This manipulation of voice as opposed to no-voice procedures has been frequently used in procedural justice research (e.g., Van den Bos, 2003; Van den Bos et al., 1997, 1998; Van den Bos & Van Prooijen, 2001; Van Prooijen et al., 2002). The main dependent variables were again procedural justice judgments.

Method

Participants and design. Participants were assigned randomly to conditions of a 3 (motor action: arm flexion vs. arm extension vs. control) × 2 (procedure: voice vs. no-voice) factorial design. A total of 118 participants (52 men and 66 women, age varying from 16 to 34 years) were recruited in the restaurant of the Free University Amsterdam. The experiment was followed by other, unrelated experiments. The experiments lasted a total of 45 min, and participants, who took part voluntarily, were paid 5 euros (U.S.$6.25).

Procedure. Participants were seated in the same cubicles and behind the same computers as in Experiment 1. We then explained the experimental procedure to the participants. The experiment was introduced as a study on how people perform tasks. Participants were informed that they would perform two rounds of tasks: a practice round of 2 min and a work round of 5 min. Additionally, participants were led to believe that all computers in the lab were interconnected and that the experimenter, who was supposed to be in one of the cubicles, could send messages to all participants during the experiment. (In reality, all stimulus information was preprogrammed, a procedure none of the participants objected to upon debriefing.) Finally, participants were informed that a lottery with a prize of 50 euros would take place among all participants, and that following the tasks the experimenter would allocate a number of lottery tickets to the participant.

Next, the tasks were explained to the participants. Figures would be presented on the upper right side of the computer screen. Each figure consisted of 36 squares, and each square showed one of eight distinct patterns. One of these patterns was presented at the upper left side of the computer screen, and participants had to count the number of squares with this pattern in the figure on the right side of the screen. After participants had indicated the correct number, a new figure was presented. This procedure was repeated for 2 min in the practice round and for 5 min in the work round. In each round, the time remaining was presented on the lower left side of the computer screen, and the number of tasks completed (i.e., the number of figures the participant had counted during the round) was presented in the lower right side of the computer screen.

After completing the practice round, we induced the motor action manipulation. Participants in the arm flexion and extension conditions were informed that they would face an additional difficulty in the work round: Ostensibly to investigate how they would perform the tasks if they simultaneously exerted a slight physical effort, participants were asked to press one of their hands against the table during the work round. In correspondence with Experiment 1, in the arm flexion condition participants were asked to put their palm under the table and press upward. In the arm extension condition participants were asked to put their palm on the table and press downward. In both conditions, participants were asked to maintain a slight pressure against the table during the entire work round and to work through the tasks using their one free hand. In the control condition, participants were not given the assignment to exert pressure against the table. The control condition thus is similar to that used in previous procedural justice experiments (e.g., Van den Bos, 2001, 2003; Van den Bos & Miedema, 2000; Van den Bos et al., 1998; Van Prooijen et al., 2002).

After the work round, all participants were informed that their score on the tasks (in comparison with other participants) was about average. Furthermore, participants in the arm flexion and extension conditions were informed that they could stop exerting pressure against the table. We then asked participants in the arm flexion and extension conditions how annoying and how physically strenuous it was to press their hand against the table (1 = *not at all*, 7 = *very much*). Also, we asked participants to indicate how they were pressing their arm against the table (1 = *pressing upward*, 2 = *pressing downward*, 3 = *not pressing*) and whether they used their left or right arm to press the table. Additionally, we asked participants in all conditions how much physical effort it took to conduct the tasks and how pressured they felt during the tasks (1 = *not at all*, 7 = *very much*).

The manipulation of procedure was then administered. Participants in the voice condition were informed that they were allowed an opportunity to voice their opinion about the number of lottery tickets that should be allocated to them. These participants were asked to type in the number of lottery tickets they thought they should receive. Participants in the no-voice condition were informed that they were not allowed an opportunity to voice their opinion about the number of lottery tickets that should be allocated to them. These participants were not asked to type in the number of lottery tickets they thought they should receive. Participants were then informed that they would be asked a number of questions before being informed about the number of lottery tickets they would receive. These questions constituted the dependent measures and the manipulation checks.

To assess participants' procedural justice judgments, we asked the following three questions: "How correctly were you treated by the experimenter?" (1 = *very incorrectly*, 7 = *very correctly*), "How dignified were you treated by the experimenter?" (1 = *not very dignified*, 7 = *very dignified*), and "How politely were you treated by the experimenter?" (1 = *very impolitely*, 7 = *very politely*). These three items were averaged into a reliable procedural justice scale (α = .93). To check the procedure manipulation, we asked the following two questions (1 = *not at all*, 7 = *very much*): "To what extent did the experimenter allow you an opportunity to

voice your opinion about the number of lottery tickets that should be allocated to you?" and "How much attention did the experimenter give to your opinion about the number of lottery tickets that should be allocated to you?" These two items were averaged into a reliable procedure check scale ($\alpha = .83$). After this, participants were fully debriefed, thanked, and paid for their participation.

Results

One male participant in the arm flexion condition indicated that he was not pressing his arm against the table during the tasks. This participant was excluded from further analyses, leaving 77 participants in the motor action conditions and 40 in the control condition. In the motor action conditions, 70 participants indicated that they used their left arm to press the table and 7 participants indicated that they used their right arm to press the table. When arm preference (left vs. right) was included as a dichotomous covariate in the analyses comparing the procedure effect in the arm flexion versus extension conditions, the results were similar to the results without this covariate, described below. Unless noted explicitly, gender of the participants did not influence the variables analyzed below and was excluded as a factor in the reported analyses.

Manipulation check. A 3 × 2 ANOVA on the procedure check scale showed a significant procedure main effect only, $F(1, 111) = 87.55$, $p < .001$. Participants in the voice condition indicated having received more opportunities to voice their opinions ($M = 5.16$, $SD = 1.45$) than participants in the no-voice condition ($M = 2.42$, $SD = 1.66$). These results showed that participants had perceived the procedure manipulation as intended.

Physical discomfort of motor action. Given that the questions concerning how annoying and how physically strenuous it was for participants to press their hands against the table could be posed only in the motor action conditions (i.e., arm flexion and extension), we analyzed these items with a 2 × 2 MANOVA. This analysis did not show significant effects on either the multivariate or the univariate level (for annoyance, overall $M = 4.66$, $SD = 1.59$; for strenuousness, overall $M = 3.57$, $SD = 1.51$). When included in the analyses, gender of the participant again influenced physical strenuousness on the univariate level, $F(1, 69) = 5.54$, $p < .03$. In correspondence with Experiment 1, women found it more physically strenuous to press their hand against the table ($M = 3.91$, $SD = 1.48$) than men ($M = 3.12$, $SD = 1.45$). However, this main effect was again nonsignificant on the multivariate level, and it was independent from the experimental manipulations. More important was that these results indicated that all participants experienced an equal amount of physical discomfort as a function of the motor action manipulation. Physical discomfort of motor action thus cannot explain the results reported here.

Pleasantness of the tasks. A 3 × 2 MANOVA on the questions concerning how much physical effort it took to conduct the tasks and how pressured participants felt when conducting the tasks revealed no significant effects on either the multivariate or the univariate level (for physical effort, overall $M = 2.77$, $SD = 1.48$; for pressure, overall $M = 3.42$, $SD = 1.60$). These results indicated that participants in all conditions rated the tasks as equally pleasant. Pleasantness of the tasks therefore cannot explain the results described below.

Procedural justice judgments. The means and standard deviations are displayed in Table 2. A 3 × 2 ANOVA on procedural justice judgments revealed a significant procedure main effect, $F(1, 111) = 162.42$, $p < .001$. Participants who received a voice procedure reported more positive procedural justice judgments ($M = 5.29$, $SD = 1.01$) than participants who received a no-voice procedure ($M = 2.72$, $SD = 1.21$). More important for the current purposes was that the results also yielded the predicted interaction, $F(2, 111) = 3.41$, $p < .04$.

Table 2
Means and Standard Deviations of Participants' Procedural Justice Judgments as a Function of Motor Action and Procedure (Experiment 2)

	Motor action					
	Arm flexion		Arm extension		Control	
Procedure	*M*	*SD*	*M*	*SD*	*M*	*SD*
Voice	5.47	1.09	5.22	1.00	5.20	0.98
No-voice	2.15	0.84	2.90	1.14	3.12	1.42

Note. Higher means indicate more positive procedural justice judgments.

To more directly test our hypotheses, we conducted three interaction contrast analyses. First, we compared the procedure effect in the arm flexion condition with the procedure effect in the arm extension condition. This analysis showed a significant interaction contrast, $F(1, 111) = 3.97$, $p < .05$. Simple main effect analyses revealed that the procedure manipulation exerted stronger effects on procedural justice judgments in the arm flexion condition, $F(1, 111) = 87.39$, $p < .001$, $\eta^2 = .44$, than in the arm extension condition, $F(1, 111) = 45.81$, $p < .001$, $\eta^2 = .29$. This result corroborates our main hypothesis and replicates the findings of Experiment 1. Second, we contrasted the procedure effect in the arm flexion condition with the procedure effect in the control condition. This interaction contrast also turned out to be significant, $F(1, 111) = 6.10$, $p < .02$. Simple main effect analyses showed that the procedure simple main effect in the arm flexion condition was also stronger than in the control condition, $F(1, 111) = 36.46$, $p < .001$, $\eta^2 = .25$. These results extend the findings obtained in Experiment 1 by revealing that approach motor action (i.e., arm flexion) enhances people's reactions to voice versus no-voice procedures relative to a control condition. Third, we contrasted the procedure effect in the arm extension condition with the procedure effect in the control condition. This interaction contrast was nonsignificant ($F < 1$).

As an aside, we note that the motor action simple main effect was nonsignificant in the voice condition ($F < 1$) but significant in the no-voice condition, $F(2, 111) = 4.50$, $p < .02$. This finding reflects one of the possible consequences of approach motivation. After all, approach motivation can produce either positive or negative reactions as a result of obtaining versus not obtaining positive stimuli (Higgins, 1997). However, this finding is inconsistent with Experiment 1, in which the motor action manipulation influenced reactions to voice instead of no-voice; we address this issue in the General Discussion.

Discussion

In correspondence with Experiment 1, Experiment 2 revealed that people respond more strongly to voice as opposed to no-voice

procedures when they flex their arms than when they extend their arms. Furthermore, the results of Experiment 2 indicate that this difference between motor action conditions is attributable to an increased impact of the procedure manipulation in the arm flexion condition, not to a decreased impact of the procedure manipulation in the arm extension condition. After all, whereas the relative strength of the voice effect did not differ between the arm extension and control conditions, the arm flexion condition produced a significantly stronger voice effect than the control condition. These findings are supportive for the idea that approach motor action amplifies people's fairness-based reactions to decision-making procedures.

Experiments 1 and 2 focused on a specific and situational operationalization of approach and avoidance motivation through a manipulation of motor action. Although previous research has established clear indications that this motor action manipulation indeed reflects the hedonic principle (Cacioppo et al., 1993; Förster, 2003; Friedman & Förster, 2000, 2002), we believe that it is important to replicate the current results with a different operationalization of approach versus avoidance motivation. To get an indication of the generality of our findings and to increase our confidence that the hedonic principle provides an appropriate theoretical framework for the present findings, in Experiment 3 we measured participants' chronic approach and avoidance motivations as individual-difference variables. We investigated the relation of these measures with a subsequent manipulation of voice versus no-voice procedures.

Experiment 3

In Experiment 3, we first measured Carver and White's (1994) Behavioral Activation Scale (BAS) and Behavioral Inhibition Scale (BIS). These scales are designed to measure people's approach versus avoidance motivational orientations as individual-difference variables. In the case of behavioral activation (BAS), we specifically focused on Carver and White's Reward Responsiveness scale, which is designed to measure people's approach responses to the occurrence or anticipation of rewarding events. This BAS scale most closely fits our theoretical line of reasoning, which has focused on the idea that people expect procedures to be rewarding because the procedures may imply the acquisition of instrumental gains or positive self-relevant social information (Tyler & Lind, 1992).[1] After the measurement of participants' approach and avoidance motivations, participants were informed that they would conduct another, ostensibly unrelated study. In this second study we manipulated voice versus no-voice procedures in the same way as we did in Experiment 2. The main dependent variables consisted of participants' procedural justice judgments (Tyler & Lind, 1992). On the basis of our line of reasoning in the introduction, and the findings of Experiments 1 and 2, we predicted that people's approach motivations (and not their avoidance motivations) would moderate procedural justice judgments as a function of voice as opposed to no-voice procedures. Specifically, we expected that the voice effect would be stronger among those high in behavioral activation than among those low in behavioral activation.

Method

Participants and design. We tested our hypothesis in a design in which we measured participants' approach and avoidance tendencies as continuous independent variables and manipulated procedure by randomly assigning participants to voice and no-voice conditions. Participants were 113 Leiden University students (42 men and 71 women, varying in age from 17 to 31 years). The experiment was preceded by another, unrelated experiment. The experiments lasted a total of 1 hr. Participants voluntarily engaged in the experiments and were paid 7 euros (U.S.$8.75).

Procedure. On arrival at the laboratory, participants were led to separate cubicles. The cubicles contained computer equipment that was used to present the stimulus information and to register the data. The experiment was presented as two separate studies. Participants started with "Study 1," which was presented as a study on "life experiences." The study consisted of a series of questionnaires with 7-point scales. Among these questionnaires was Carver and White's (1994) BIS, a seven-item scale designed to measure participants' avoidance responses to the occurrence or anticipation of undesirable events (example item: "I worry about making mistakes"; $\alpha = .81$). Also included was Carver and White's (1994) five-item Reward Responsiveness scale of the BAS. This scale is designed to measure people's approach responses to the occurrence or anticipation of rewarding events (example item: "When I see an opportunity for something I like, I get excited right away"; $\alpha = .78$). In correspondence with Carver and White's validation study, the BIS and BAS scales were positively correlated ($r = .19$, $p < .05$).

The first study then ended, and participants continued with "Study 2." In correspondence with Experiment 2, this study was presented as a study on how people conduct tasks. Furthermore, participants were informed that the experimenter could send messages to the participants using the computer network and additionally that a lottery would take place among all participants. The winner of the lottery would receive a prize of 50 euros. A total of 200 lottery tickets would be divided among all participants, and some of these lottery tickets would be allocated to the participant.

Participants then started with the tasks. The tasks consisted of the counting of squares in the same way as in Experiment 2 (Van den Bos et al., 1997, 1998; Van den Bos & Miedema, 2000; Van den Bos & Van Prooijen, 2001; Van Prooijen et al., 2002, 2004a). However, in this experiment, participants would conduct a total of 25 tasks, without the time constraint that we used in Experiment 2. Participants were asked to complete all 25 tasks.

Following the tasks, we manipulated procedure. This manipulation was the same as in Experiment 2. After the procedure manipulation, participants were again informed that they would first be asked some questions before being informed about the number of lottery tickets they would receive. These questions constituted the dependent measures and the manipulation checks. To measure procedural justice judgments, we asked the following questions: "How correctly were you treated by the experimenter?" (1 = *very incorrectly*, 7 = *very correctly*), "How respectfully were you treated by the experimenter?" (1 = *very disrespectfully*, 7 = *very respectfully*), "How politely were you treated by the experimenter?" (1 = *very impolitely*, 7 = *very politely*), and "To what extent do you respect the experimenter?" (1 = *not at all*, 7 = *very much*). Confirmatory factor analysis revealed an excellent fit of a one-factor model comprising these four items, $\chi^2(2, N = 113) = 2.27$, *ns*; normed fit index = .99; nonnormed

[1] Carver and White (1994) identified one BIS scale and three BAS scales. The two other BAS scales are the Drive scale, which measures people's persistence when pursuing desirable goals, and the Fun Seeking scale, which measures people's tendencies to approach new and exciting situations on the spur of the moment. Given that these two scales have a much poorer fit to our theoretical argument than the Reward Responsiveness scale, the Drive and Fun Seeking scales were ignored in the current research.

fit index = 1.00; comparative fit index = 1.00. We therefore averaged these items into a reliable procedural justice scale ($\alpha = .85$). To check the procedure manipulation, we asked the same two questions as in Experiment 2, which were again averaged into a reliable procedure check scale ($\alpha = .78$). The experiment then ended, and participants were debriefed, paid, and thanked for their participation.

Results

The results were analyzed with linear regression analyses that specified as independent variables the main effects (the BIS scale, the BAS scale, and the procedure manipulation), the two-way interactions (BIS × Procedure, BAS × Procedure, and BIS × BAS), and the three-way interaction (BIS × BAS × Procedure). Following Cohen, Cohen, West, and Aiken's (2003) recommendations, we centered participants' answers on the BIS and BAS scales and effect-coded the procedure manipulation (1 and −1). The interaction terms were based on the products of the centered BIS and BAS scales and the effect-coded procedure manipulation.[2]

When included as an independent variable in the regression analyses, gender did not show any main effects or interactions with the other independent variables on the manipulation check or the dependent variable. We therefore dropped gender in the statistical analyses reported here.

Manipulation check. A regression analysis on the procedure check scale indicated that the regression equation accounted for a significant amount of variance ($R^2 = .48$), $F(7, 105) = 13.82$, $p < .001$. Participants' answers on the procedure check scale were predicted by the procedure main effect only ($\beta = .70$, $p < .001$). Participants in the voice condition perceived more opportunities to voice their opinions ($M = 4.67$, $SD = 1.37$) than participants in the no-voice condition ($M = 2.11$, $SD = 1.47$). From these analyses we conclude that participants perceived the procedure manipulation as intended.

Procedural justice judgments. The results of the regression analysis on procedural justice judgments are displayed in Table 3. The regression equation accounted for a significant amount of variance on procedural justice judgments ($R^2 = .16$), $F(7, 105) = 2.79$, $p < .02$. As displayed in Table 3, participants' procedural justice judgments were predicted by the procedure manipulation ($\beta = .32$, $p < .01$). More important, the results also yielded a significant BAS × Procedure interaction term ($\beta = .19$, $p < .05$). To further explore this interaction term, we conducted simple slopes analyses (Cohen et al., 2003). Among those high in approach motivation, voice as opposed to no-voice procedures positively influenced procedural justice judgments ($\beta = .41$, $p < .001$), whereas among those low in approach motivation, voice as opposed to no-voice procedures did not influence procedural justice judgments ($\beta = .13$, $p > .42$). The BAS × Procedure interaction is illustrated in Figure 1. These results indicate that, as predicted, the procedure manipulation exerted stronger effects on participants' procedural justice judgments among those high in approach motivation than among those low in approach motivation.

Further, the BAS did not predict procedural justice judgments in the voice condition ($\beta = .10$, $p > .45$) but did predict procedural justice judgments in the no-voice condition ($\beta = -.28$, $p < .04$). These latter results, which are consistent with the findings obtained in Experiment 2, are revisited in the General Discussion.

Table 3
Results From Regression Analyses: Procedural Justice Judgments as a Function of the Behavioral Inhibition Scale (BIS), the Behavioral Activation Scale (BAS), and Procedure (Experiment 3)

Predictor	β	t (105)
Procedure	.32	3.49**
BIS	−.09	−0.94
BAS	−.11	−1.15
BIS × Procedure	.01	0.07
BAS × Procedure	.19	2.06*
BIS × BAS	−.02	−0.19
BIS × BAS × Procedure	−.03	−0.33

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

Discussion

The results of Experiment 3 extend the results obtained in Experiments 1 and 2 in two ways. First, the finding that people's approach motivations (and not their avoidance motivations) moderated the effects of voice as opposed to no-voice procedures further corroborates the idea that procedural justice judgments are shaped by people's approach motivations and less so by their avoidance motivations. These findings are in correspondence with the findings obtained in Experiment 2, which indicated that approach motor action enhanced the voice effect relative to a control condition. Second, the findings in Experiment 3 increase the plausibility of the assumption that the motor action manipulation of Experiments 1 and 2 activated participants' motivational orientations (cf. Cacioppo et al., 1993) and that it was these motivational orientations that influenced people's reactions to decision-making procedures. After all, the findings of Experiment 3, in which we directly measured participants' motivational orientations, are consistent with the effects of motor action in Experiments 1 and 2. Together with the previous experiments, Experiment 3 has further revealed evidence that people's procedural justice judgments are influenced profoundly by their motivational orientations.

General Discussion

The three experiments presented here provide empirical evidence for the proposition that people's motivational orientations (approach vs. avoidance) influences the voice effect. The results of Experiments 1 and 2 showed that arm flexion, a motor reflex that is associated with approach motivation (Cacioppo et al., 1993; Förster, 2003), leads to stronger voice effects than arm extension, a motor reflex that is associated with avoidance motivation. These

[2] Given that our main prediction was a lower order interaction (i.e., a two-way interaction in the presence of a three-way interaction), it was in this case particularly important to center the BIS and BAS scales. As emphasized by Cohen et al. (2003, p. 261), the interpretation of lower order coefficients in linear regression is meaningful only if all main effects and interactions are based on centered predictors. After centering our predictors, the reported linear regression analyses produced the same beta weights as hierarchical regression analyses.

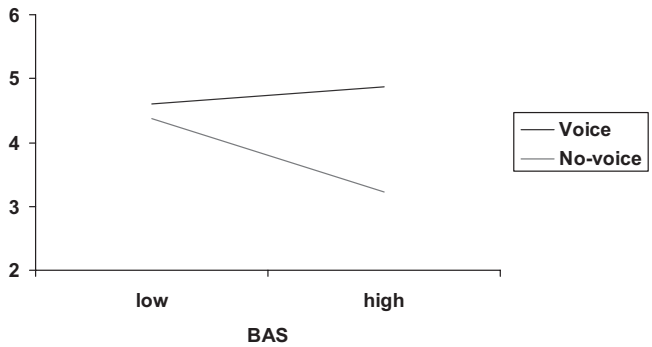

Figure 1. Procedural justice judgments as a function of the Behavioral Activation Scale (BAS) and procedure.

findings were extended in a third experiment in which we measured people's approach and avoidance motivational orientations as individual-difference variables (Carver & White, 1994). The findings of Experiment 3 were in correspondence with Experiments 1 and 2 by revealing that people high in approach motivation displayed stronger reactions to voice as opposed to no-voice procedures than people low in approach motivation. Furthermore, people's avoidance motivations turned out to be unrelated to the effects of voice versus no-voice procedures on procedural justice judgments. Taken together, the results of these experiments clearly suggest that voice effects are shaped by people's approach motivations, and less so by their avoidance motivations.

Although these effects were found in three experiments, we note that approach motivation stimulated reactions to voice procedures in Experiment 1 and reactions to no-voice procedures in Experiments 2 and 3. These differential effects may reflect two possible approach-motivated reactions (Higgins, 1997): People may respond positively to obtaining pleasure (as implied by voice procedures) or negatively to being denied pleasure (as implied by no-voice procedures). (Likewise, Higgins noted that people's avoidance motivations can also be reflected both by positive reactions to avoiding pain and by negative reactions to not avoiding pain.) The findings in Experiments 2 and 3 were in correspondence with previous notions that people's negative responses to injustice usually are stronger than their positive responses to justice (Folger, 1984; Van Prooijen, Van den Bos, Lind, & Wilke, 2006). It may therefore be the case that reactions to no-voice procedures in particular are sensitive to people's motivational orientations. However, whereas in Experiments 2 and 3 participants were not fully informed about their outcomes, in the scenario of Experiment 1 participants received full disclosure of the positive outcomes of voice. This explicit outcome information might have caused approach motivation to stimulate people's responses to voice instead of no-voice procedures. These explanations are speculative, and future research might explore under what conditions motivational orientations influence reactions to voice or no-voice procedures. For now, it seems safe to conclude that people's motivational orientations have the potential to influence reactions to both voice and no-voice procedures. More important for the current purposes is the finding that people's approach motivations yielded stronger reactions to voice versus no-voice procedures than people's avoidance motivations, a finding that was replicated in three experiments.

The main theoretical contribution of the current research is that it has increased insights into the motivational nature of the voice effect. We have made explicit that theoretical perspectives on procedural justice have assumed that people's approach motivations stimulate their fairness-based responses to voice and no-voice procedures (e.g., Lind & Tyler, 1988; Thibaut & Walker, 1975; Tyler & Blader, 2003; Tyler & Lind, 1992). In correspondence with this assumption, our results suggest that participants' procedural justice judgments were predominantly associated with the chronic or situational accessibility of their approach motivations. This conclusion has implications for both fundamental and applied social justice research. After all, people are subjected to voice or no-voice procedures in numerous social settings, such as organizations, legal settings, schools, and other settings that involve interactions with decision-making authorities (Lind & Tyler, 1988). In such social situations, knowing whether people react out of approach or avoidance motivation might influence how to assuage their negative reactions when they are denied voice or when providing voice is impossible. Furthermore, understanding the motivational nature of voice effects may increase scientists' ability to predict people's reactions to voice or no-voice procedures in these social situations. These practical implications need to be tested further, of course, and it would be premature to draw firm conclusions regarding the real-life implications of the current findings. Although the findings presented here may not be instantly applicable to all possible types of social situations—as usually is the case in experimental research—the conclusions that we draw here extend existing procedural justice theories (Thibaut & Walker, 1975; Tyler & Lind, 1992) and may therefore provide a more solid theoretical base for both fundamental and applied research.

It is important to note that the current findings do not imply that people's reactions to procedures necessarily are always approach motivated (cf. Camacho, Higgins, & Luger, 2003). Notably, a constraint of our experiments was that participants received voice versus no-voice procedures about decisions that involved gains instead of losses (i.e., a financial bonus in Experiment 1 and lottery tickets in Experiments 2 and 3). As noted in the introduction, this focus on gains is in correspondence both with many real-life decisions involving positive outcomes and with a substantial number of previous procedural justice studies. We therefore decided that a focus on gain-framed decisions would be a good starting point to explore the underlying motivational principles of voice effects. Having said this, we note that in everyday life, loss decisions do also happen of course, and it is noteworthy that some procedural justice research has explicitly focused on loss decisions. For example, Brockner and his colleagues have studied procedural justice effects in the context of job layoff decisions (e.g., Brockner et al., 1994, 1998). It would be interesting to investigate how approach versus avoidance motivation influences the voice effect in these loss-oriented situations.

More specifically, it might be expected that a gain–loss distinction moderates the influence of motivational orientations on fairness-based reactions to voice procedures. Such a prediction would be consistent with regulatory focus theory, which has posited that the hedonic principle operates differently when serving different human needs (Higgins, 1997, 2000; see also Camacho et al., 2003; Förster et al., 1998; Lee & Aaker, 2004). According to this theory, people's desired end state in a gain-framed context

entails accomplishments (i.e., a promotion focus), and to achieve this end state, people strategically approach and avoid gains versus nongains. Given the focus on gains, however, approach motivation is the dominant tendency because it provides a better fit to people's regulatory orientation than avoidance motivation. In a loss-framed context, people's desired end state entails security (i.e., a prevention focus), and to achieve this end state, people strategically approach and avoid losses versus nonlosses. Given the focus on losses, however, avoidance motivation provides the better fit to people's regulatory orientation. Extrapolating this theoretical framework to the procedural justice field, it may be expected that when people are confronted with voice or no-voice procedures in loss-framed situations (e.g., when material losses are at stake, or social losses such as when people are threatened to be excluded from valuable social groups), their fairness-based reactions may be stimulated by their avoidance motivations instead of their approach motivations. These ideas are beyond the scope of the current article but do constitute a challenging opportunity for future research. It is important to keep in mind that the current research was not focused on differential effects of gains versus losses but on the possibility that the hedonic principle constitutes an important motivational dimension to understand people's procedural justice judgments.

Another issue that we would like to raise is that we focused exclusively on voice versus no-voice procedures and not on other elements of procedural justice, such as procedural accuracy or consistency between persons (e.g., Leventhal, 1980). Voice versus no-voice procedures strongly influence procedural justice judgments and constitute the basis for influential procedural justice theories (Brockner et al., 1998; Folger, 1977; Lind & Tyler, 1988; Tyler & Lind, 1992; Van den Bos, 2001; Van den Bos et al., 1998). However, voice is also distinct from other elements of procedural justice because it has more of an agentic quality to it: In the case of voice procedures, procedural justice judgments partially depend on actions of the recipient, that is, their willingness and ability to provide input in the decision-making process. In contrast, most other elements of procedural justice almost exclusively refer to actions on the part of the decision maker rather than actions by the recipient. This active role of the recipient, which differentiates voice from other elements of procedural justice, may be psychologically associated with people's approach motivations. This line of reasoning is speculative and leads to the empirical question of whether the current findings would generalize to other elements of procedural justice, such as accurate versus inaccurate procedures. Be that as it may, for now one can conclude that motivational orientations have a profound influence on fairness-based reactions to voice and no-voice procedures, and these procedures are a key factor in the psychology of procedural justice.

Given that hedonic motivation precedes the hedonic states of pleasure and pain, it might be reasoned that the current findings are related to mood. We suspect that the current findings cannot be explained by variations in mood, for at least two reasons. First, previous research has indicated that the motor action manipulation does not influence mood (Cacioppo et al., 1993). This finding is consistent with the assumption that the motor action manipulation induces approach and avoidance motivation: After all, both approach and avoidance motivation can elicit positive and negative moods, depending on how successful people are in approaching pleasure or avoiding pain. Second, previous research has explicitly investigated the influence of mood on reactions to voice and no-voice procedures (Van den Bos, 2003), and the results were different from the current findings. Van den Bos (2003) found that mood influenced procedural fairness judgments only if people did not have information concerning what decision-making procedures were adopted by authorities. In the current experiments, however, all participants received explicit information about the procedures used (voice or no-voice), yet motor action moderated the voice effect in predictable ways. Taken together, the current findings are more likely explained by hedonic motivation (approach vs. avoidance) rather than by the valence of specific hedonic states (positive vs. negative).

The main ideas of the current article were inspired by both instrumental and noninstrumental perspectives of procedural justice effects. Nevertheless, it should be noted that the present studies were not intended as direct tests of either of these perspectives, nor did we intend to show that both outcomes and relational concerns explain the relation between the hedonic principle and procedural justice judgments. After all, our experimental designs did not incorporate manipulations of outcomes or of interpersonal relatedness. Rather, we have assumed that the hedonic principle constitutes a basic phenomenon that describes the motivational process of how people seek to fulfill their instrumental and relational needs. These instrumental and relational needs are typical procedural-justice-related concerns (Lind & Tyler, 1988), leading us to reason that the hedonic principle is a predictor of procedural justice judgments. Given that the results were supportive for this idea, the current research may provide a starting point to more directly explore the processes that form the motivational underpinnings of people's strivings for fair outcome distributions and respectful interpersonal treatment.

To conclude, we have tried to reveal here that the hedonic principle is related to people's fairness-based reactions to decision-making procedures. Evidence for this idea was found by investigating the effects of physiological feedback produced by approach versus avoidance muscle stimulations (Experiments 1 and 2) and individual-difference measures of behavioral activation and behavioral inhibition (Experiment 3) on reactions to procedures. These three studies have led to the conclusion that people are particularly sensitive to common conceptualizations of voice versus no-voice procedures when they are approach motivated. As such, one can conclude that the hedonic principle is an important principle in the psychology of procedural justice.

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