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Injustice and Employees' Destructive Responses: The Mediating Role of State Negative Affect

Nico W. VanYperen,^{1,2} Mariët Hagedoorn,¹ Michiel Zweers,¹
and Saapke Postma¹

The focus of this study was employees' destructive behavioral intentions (i.e., exit, neglect, and aggressive voice) as a result of perceived injustice. In order to get an indication of the generalizability of the results, two studies employing different methodologies were conducted among different samples: a survey study (Study 1) among 244 female maternity nurses from The Netherlands, and a vignette study (Study 2) among 71 male and 43 female employees from an international company in South Africa. Furthermore, the second study tested whether the effects of injustice on destructive behavioral intentions were mediated by state negative affect. Two models appear to fit the data well. The first model suggests that interactional injustice gives rise to negative behavioral reactions through an increase in state negative affect. The second model shows that procedural justice can buffer the negative effects of low distributive justice. Specifically, employees report more negative affect and, subsequently, a stronger tendency to leave the organization only when both distributive and procedural justice are low. The theoretical and practical implications of these findings are discussed.

KEY WORDS: procedural justice; interactional justice; distributive justice; state negative affect; exit; neglect; aggressive voice.

The way employees respond to decisions of authorities, such as a decision to give or not to give a salary increase, or to assign or not to assign a certain challenging task, may have an important impact on their relationship with these authorities and eventually on the effectiveness of the organization (Hagedoorn *et al.*, 1999; Rusbult *et al.*, 1988; Sheppard *et al.*, 1992; VanYperen *et al.*, 1999). When employees

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perceive a decision as fair, they are usually satisfied, but when they perceive a decision as unfair, they may become angry and resentful. As a consequence of these negative feelings, employees may manifest such behavioral reactions as protesting the decision, reporting sick, decreasing work effort, and leaving the organization. As noted by Griffin *et al.* (1998a,b), these types of destructive employee reactions have recently been given greater attention in the organizational sciences (cf. O'Leary-Kelly *et al.*, 1996). Following Rusbult *et al.* (1988), *destructive behaviors are defined here as responses that are aimed at dissolving the relationship between employee and organization or that allow this relationship to deteriorate*. The destructive behaviors that are studied are *Exit* (i.e., leaving the organization), *Neglect* (e.g., reporting sick, coming in late, missing meetings, taking care of personal business during working hours), and *Aggressive Voice* (attempts to change the situation while taking into account one's own interests³ exclusively) (Farrell, 1983; Hagedoorn *et al.*, 1998, 1999; Rusbult *et al.*, 1988).⁴ The purpose of the present investigation was to examine the link between perceptions of injustice and intentions to act destructively, a topic of interest to both researchers and practitioners. It will be argued that the strength of the relationship between injustice and the different types of destructive behavioral intentions may depend on the form of injustice. Furthermore, a mediation model is proposed (Study 2) that asserts that injustice evokes destructive behavioral intentions through state negative affect. To get an indication of the generalizability of the results, two studies employing different methodologies were conducted among different samples: a survey study (Study 1) among 244 female maternity nurses from The Netherlands, and a vignette study (Study 2) among 71 male and 43 female employees from an international company in South Africa.

There are three reasons for employees to regard a decision as unfair; employees may feel that (a) the outcome of the decision (distributive justice), (b) the formal procedures that lead to the outcome (procedural justice), or (c) the way they are treated by the authority, who is responsible for the decision (interactional justice) is unjust. With regard to distributive justice, equity theory probably offers the best-developed theoretical framework. The central assumption of equity theory

³"Own interests" refer to getting what you want in the issue at hand. In line with the definition of destructive behaviors, in the long run, aggressive voice may not serve one's interests because it may lead to a deterioration of the relationship with the authority (e.g., the supervisor, "the organization," a human resource executive). "Own interests" may also include the interests of others one represents. For example, "aggressive voice" may be efforts made that benefit one's patients, subordinates, or customers rather than one's personal interests. The label "aggressive" is used because the aggressive form of voice *does not* include attempts to solve the problem in which one considers the concerns of the authority that has "caused" the problem. Voice behaviors that take into account the concerns of the authority as well, are referred to as "considerate voice" (Hagedoorn *et al.*, 1999).

⁴In addition to the degree of destructiveness, these behaviors can be described in terms of active versus passive. Active is defined as dealing directly with a problem, and thus exit and aggressive voice are considered to be active responses, whereas neglect is regarded as a passive reaction (Hagedoorn *et al.*, 1999; Rusbult *et al.*, 1988).

is that justice is a function of the proportionality of outcomes to inputs of the person and comparison targets (Adams, 1965). People will feel angry and resentful when their ratio of outcomes to investments is lower than the ratio of outcomes to investments of a referent other. Consequently, it is assumed that these individuals are motivated to restore equity. In their attempt to restore equity, employees might lower their investments by decreasing their effort or by reporting sick (e.g., VanYperen *et al.*, 1996). Alternatively they might persuade the organization to increase the employees' outcomes, or even demand such an increase (Hagedoorn *et al.*, 1998), or they might "get even" by stealing (Greenberg, 1993) or engaging in vandalism (DeMore *et al.*, 1988). Hence, it was expected that perceptions of distributive injustice are positively related to destructive responses. Furthermore, there is empirical evidence that the two other forms of injustice, procedural and interactional, motivate employees to respond destructively (e.g., Bies, 1987; Greenberg, 1987; Greenberg and Alge, 1998; Hagedoorn *et al.*, 1998; Lind and Tyler, 1988; Schaubroeck *et al.*, 1994; Thibaut and Walker, 1975; Tyler *et al.*, 1996; VanYperen *et al.*, 1999). Accordingly, *Hypothesis 1* is that all three forms of perceived injustice elicit destructive behavioral intentions.

The referent cognitions theory asserts that people will feel especially resentful when an unfavorable outcome is caused by an unfair procedure because such an unfair procedure gives rise to the idea that an outcome would have been better (referent outcome) if only a fair procedure had been used (Folger, 1987). Fair procedures are characterized by consistency across persons and over time, bias suppression, accuracy, correctability, representativeness, and ethicality (Leventhal, 1980). Several studies have supported the assertion that individuals feel particularly unfairly treated when they believe that the unfavorable outcome results from an unfair procedure (Cropanzano and Folger, 1989; Folger and Martin, 1986; Folger *et al.*, 1978; Greenberg and Alge, 1998; Taylor *et al.*, 1987). However, not only formal procedures but also interpersonal aspects of justice (i.e., interactional justice; Bies, 1987), such as an adequate explanation for a certain outcome and respectful treatment, were found to interact with outcome fairness or favorability (Brockner and Wiesenfeld, 1996; Folger, 1993). Hence, it was hypothesized that the associations between outcome fairness or favorability and destructive behavioral intentions will be qualified by (i.e., perceptions of outcome fairness interact with) perceptions of either procedural unfairness or interactional unfairness such that highest intentions to react destructively will be reported in case of both distributive and procedural, or both distributive and interactional injustice (*Hypothesis 2*).

Skarlicki and Folger (1997) regarded procedural and interactional justice as interchangeable. As long as the supervisor is considerate of employees' needs and treats them with respect and dignity, employees can do without the safeguards of formal procedures. However, when the supervisor's interpersonal behavior is unfair, these procedural safeguards are crucial. In a similar vein, interactional justice is more strongly needed when procedural justice is low than when procedural

justice is high. In line with this reasoning (Skarlicki and Folger, 1997), *Hypothesis 3* predicts a three-way interaction among distributive justice, procedural justice, and interactional justice in their effect on destructive behavioral intentions such that highest intentions will occur among employees who perceive all three forms of injustice simultaneously.

Two studies, employing different methodologies, were conducted to test these hypotheses in different samples; a survey study (Study 1) among 244 Dutch nurses and a vignette study (Study 2) among 114 employees from an international company in South Africa. The vignette study afforded us the opportunity to examine the impact of justice manipulations on destructive behavioral intentions via state negative affect in a real-life sample. Indeed, although a recent review by Brockner and Wiesenfeld (1996) shows that the interactive effect of outcome favorability and procedural justice (including interactional justice) is a robust finding, the mediation role of negative affect has never been reported in the research on organizational justice. This is remarkable because justice theories assume that perceptions of injustice lead to behavioral or psychological reactions via state negative affect (e.g., Adams, 1965). As Skarlicki and Folger (1997) put it, "The anger and resentment associated with perceptions of unfair procedures may energize individuals to engage in retaliation" (p. 435). Negative affect reflects the degree to which someone feels tense and uncomfortable. A high level of negative affect is characterized by feelings of anger, misery, fear, nervousness, and resistance, whereas a low level of negative affect represents peacefulness and calmness (Watson and Tellegen, 1985). Thus, the additional hypothesis (*Hypothesis 4*) tested in Study 2 is that injustice gives rise to destructive behavioral intentions through an increase in state negative affect. Note that the mediating role of state negative affect cannot be tested in the survey study (Study 1). It does not make sense to link perceptions of injustice at the workplace to affect at a particular point of time. In order to understand state negative affect, causal conditions have to be manipulated experimentally.

STUDY 1

Sample and Procedure

The sample in Study 1 consisted of Dutch female maternity and district nurses who were employed in one particular health care organization. Their task was to take care of patients who (temporarily) needed daily assistance (e.g., the elderly, handicapped individuals, mothers with a new-born child). The data were collected as part of a more general survey on work load and job satisfaction. Before sending out the questionnaire, the nurses were informed about the purpose of the study by a newsletter. About 73% filled out the questionnaire, which they returned directly in sealed envelopes to the researchers. Because more than 90% of the employees were female and, consequently, male respondents were very few in number ($n = 17$),

they were excluded from the analyses, leaving a homogeneous sample of female respondents only. After this selection and listwise deletion, the sample consisted of 244 female nurses. The average age of the participants was 40.1 years ($SD = 9.6$); 10% had completed a junior secondary vocational program, 65% had a high school or senior secondary vocational education, and 25% had had a higher vocational education.

Measures

Distributive justice was assessed with a five-item scale developed by VanYperen (1996, 1998). The participants responded to the stem "How often do you feel that . . . ?" An example is, "You invest more in your job than you receive in return." A five-point scale, ranging from (1) *never* to (5) *very often* followed each item. Cronbach's Alpha was .87.

Procedural justice was assessed by six items representing the six characteristics of fair procedures (Leventhal, 1980), namely, consistency, bias suppression, accuracy, correctability, representativeness, and ethicality (cf. Folger and Konovsky, 1989; Niehoff and Moorman, 1993). For example, before decisions are made, employees have the opportunity to appeal. The response categories range from (1) *totally disagree* to (5) *totally agree*. Cronbach's Alpha was .84.

Interactional justice. The measure of interactional justice was constructed for this study. Some of the items included in this scale are based on the work of Niehoff and Moorman (1993) and Folger and Konovsky (1989). The four items included focused on the interpersonal behavior of the supervisor (cf. Moorman, 1991). For example, "Does your supervisor treat you with respect and dignity?" A four-point scale (never, sometimes, often, always) followed the items. Cronbach's Alpha was .87.

Destructive responses were measured with scales developed and validated by Hagedoorn *et al.* (1999). The different responses were introduced as follows:

Everybody occasionally encounters a problem or a problematic event at work. This can be a difference of opinion with your supervisor, frustrations with regard to the behavior of co-workers, or dissatisfaction, for instance, about a schedule or a specific task you are assigned to do. People tend to react differently to these experiences. On the following pages, several descriptions of possible reactions are listed. Would you indicate how likely it is that you would react to problematic events in the ways described?

The general stem that followed was, "When you encounter a problem or a problematic event at work, how likely is it that you . . . ?" *Exit* was assessed by six items. Examples are ". . . intend to change employers," ". . . actively look for a job outside the field of health care," and ". . . consider possibilities to change jobs." *Neglect* was measured by five items, for example, ". . . come in late because you do not feel like working," ". . . put less effort into your work than may be expected of you," and ". . . report sick because you do not feel like working." The *Aggressive*

Voice subscale consisted of seven items, including “. . . being persistent with your supervisor in order to get what you want,” “. . . starting a ‘fight’ with your supervisor,” and “. . . try to win the case.” The items were completed with seven-point scales, ranging from (1) *definitely not* to (7) *yes, definitely*. Cronbach’s alpha’s were .92, .62, and .76, respectively.

Results

To test whether distributive, procedural, and interactional justice are not only conceptually but also empirically separable constructs, the 15 items representing the three constructs were subjected to a factor analysis (principal-components method). The initial three-factor solution accounted for 64.2% of the total variance. Factor loadings on the rotated factors (oblique rotation; cf. Ford *et al.*, 1986) and interfactor correlations are presented in Table I. Table I shows that the three sets of items split cleanly into the three hypothesized factors. These results provide clear evidence that the three concepts are empirically distinguishable components.

Table II provides an overview of correlations between all the variables. Significant correlations were observed between the demographic variables Educational

Table I. Specified Three-Factor Solution (Oblique Rotation) of a Factor Analysis (Principal-Components Method) of Distributive, Procedural, and Interactional Justice Items

	Factor 1	Factor 2	Factor 3
<i>Distributive Justice</i>			
You work yourself too hard considering your outcomes.	.413	.204	-.865
You give a great deal of time and attention to the organization, but get very little appreciation.	.560	.284	-.809
You invest more in your job than you receive in return.	.424	.312	-.896
The rewards you receive are not proportional to your investments.	.213	.049	-.709
You put more energy into your job than it is worth.	.349	.247	-.753
<i>Procedural Justice</i>			
Rules and procedures are applied consistently.	.684	.091	-.250
Decisions by management are based on information that is as accurate and complete as possible.	.751	.199	-.310
Decisions are clarified to affected employees.	.838	.184	-.377
Before decisions are made, employees have the opportunity to appeal.	.764	.196	-.391
The basic concerns, values, and views of employees are not considered (reversed item).	.734	.222	-.365
Management is honest and ethical in dealing with employees.	.676	.361	-.327
<i>Interactional Justice</i>			
Is your relationship with your supervisor good?	.206	.862	-.202
Does your supervisor treat you with respect and dignity?	.222	.790	-.247
Does your supervisor treat you with kindness and consideration?	.195	.836	-.150
Do you get along well with your supervisor?	.267	.904	-.219
Eigenvalue	5.57	2.38	1.68
<i>Interfactor correlations</i>			
Factor 2	.26		
Factor 3	-.44	-.24	

Table II. Correlations, Means, and Standard Deviations of all the Variables

Variables	2	3	4	5	6	7	8	M	SD
Educational Level	.02	-.37*	-.36*	-.15*	.30*	.21*	.27*	2.14	0.57
Age	—	-.01	-.15*	-.15*	-.14*	-.27*	-.09	40.14	9.58
Distributive Justice		—	.50*	.28*	-.45*	-.25*	-.46*	3.15	0.87
Procedural Justice			—	.28*	-.34*	-.18*	-.31*	2.81	0.76
Interactional Justice				—	-.32*	-.15*	-.32*	3.37	0.58
Exit					—	.34*	.35*	2.59	1.38
Neglect						—	.43*	1.56	0.63
Aggressive Voice							—	2.64	0.91

* $p < .01$.

Level and Age, and both the independent (justice perceptions) and dependent (destructive behavioral intentions) variables. The correlations between the independent variables varied from .28 to .50, and those between the dependent variables from .34 to .43. All three independent variables were negatively correlated to the dependent variables. In other words, the more injustice nurses perceived, the more likely they were to react to problematic events in a destructive way. These results support *Hypothesis 1*.

Before considering the results of the regression analyses, it should be noted that the nurses in this sample were nested within work groups. Accordingly, the multilevel program MLn (Rasbash and Woodhouse, 1995) was used to determine whether individual perceptions were influenced by work group organization and the specific behavior and characteristics of the work group supervisor. The results revealed that the estimated interwork group variance for all the variables under consideration was close to zero and nonsignificant, indicating that individual perceptions did not vary systematically across work groups. Thus, common (disaggregated) regression analysis is appropriate for these data.⁵

The results of the regression analyses in which Exit, Neglect, and Aggressive Voice were regressed on the independent variables and their interactions are presented in Table III. Educational Level and Age were entered first as control variables because of their significant correlations with the variables under study (see Table II). Although main effects were observed among all three variables of justice and the destructive behavioral intentions (see Table II), *Hypothesis 1* is particularly supported for interactional justice. This is the only main effect that made a unique contribution to the prediction of the behavioral intentions. The more the nurses felt unfairly treated by their supervisors, the stronger their intention to behave destructively when confronted with a problematic event.

Hypothesis 2 is only partly supported: only one significant interaction effect was found. The nurses had a higher intention to quit when they believed that their unfavorable outcomes resulted from unfair formal procedures (see Fig. 1). Apparently, they felt particularly unfairly treated when both distributive and

⁵We wish to thank Agnes E. van den Berg for her help in multilevel data analysis.

Table III. Unstandardized Regression Weights^a of Exit, Neglect, and Aggressive Voice Regressed on the Justice Variables and Their Interactions Controlled for Educational Level and Age (Step 1)

	Exit	Neglect	Aggressive Voice
Step 2			
Distributive Justice (<i>D</i>)	-.60	.08	.15
Procedural Justice (<i>P</i>)	-.15	-.06	-.08
Interactional Justice (<i>I</i>)	-.26**	-.11*	-.26***
<i>R</i> ² change	.20	.05	.21
<i>F</i> change	23.01***	4.71**	23.30***
Step 3			
<i>D</i> × <i>P</i>	.22**	.02	.03
<i>D</i> × <i>I</i>	.05	-.05	-.14
<i>P</i> × <i>I</i>	-.01	-.03	.03
<i>R</i> ² change	.03	.01	.01
<i>F</i> change	3.15*	0.76	0.83
Step 4			
<i>D</i> × <i>P</i> × <i>I</i>	-.05	.04	.06
<i>R</i> ² change	.00	.00	.00
<i>F</i> change	0.39	0.94	1.12

^aThe unstandardized regression weights concern the analysis in which all main and interaction effects were entered.

* *p* < .05; ** *p* < .01; *** *p* < .001.

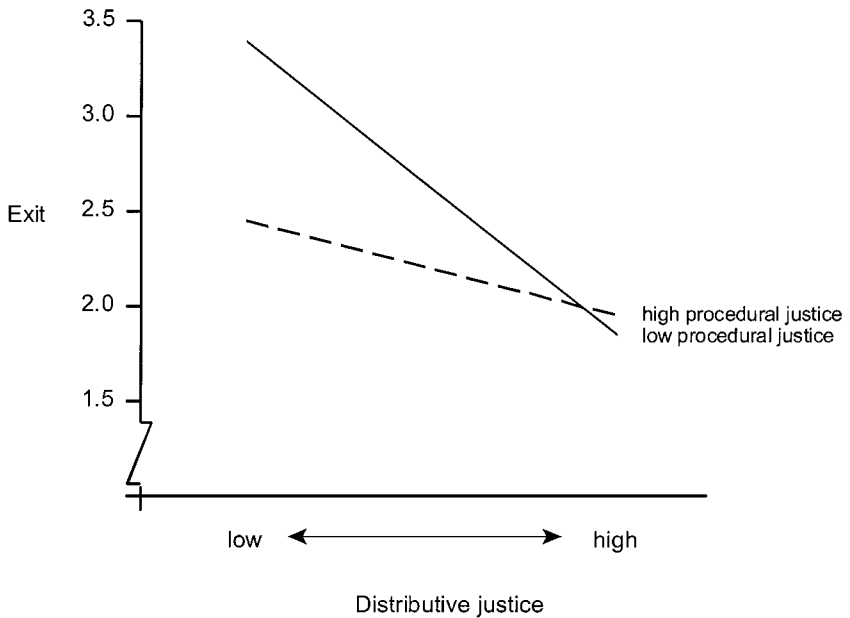


Fig. 1. Interaction between Distributive and Procedural Justice on exit.

procedural justice were perceived as low. In contrast to expectations, however, this two-way interaction could not be qualified by the three-way interaction among distributive, procedural, and interactional injustice on exit (see Table III). Thus, *Hypothesis 3* must be rejected.

STUDY 2

The theoretical purpose of Study 2 (an experimental vignette study) was twofold: (1) to test the three hypotheses in a different sample employing a different methodology, and (2) to test a mediation model, which asserts that injustice causes destructive behavioral intentions through state negative affect (*Hypothesis 4*). The practical purpose of this study was to examine under what conditions task enlargement for each employee could be implemented most effectively. The company's management was considering task enlargement because they believed that this measure would strengthen their position in the market. Therefore, an experimental design was developed in which different scenarios were described, each closely resembling the actual situation employees were facing.

Sample and Procedure

A vignette study was conducted among 120 employees working for an international business communications company in South Africa. Five employees were excluded from the analyses because they did not understand the vignette (see manipulation checks), and one employee was excluded because he was an outlier with regard to age (14 years). The final sample consisted of 71 male and 43 female employees with a mean age of 40.0 years. One-third (33.3%) of the sample had completed high school, 30.7% had completed technical vocational training, 37.7% had completed at least 1 year of college, and 5.3% had a Master's degree, Ph.D., or other advanced degrees.

The employees were randomly assigned to conditions in a 2 (distributive justice: high vs. low) \times 2 (procedural justice: high vs. low) \times 2 (interactional justice: high vs. low) factorial design. The number of employees in each cell ranged from 13 to 15. The employees were working in one of the three branches of the company. In the first and largest branch, 200 employees received a questionnaire with a letter signed by the management, requesting the employee to complete the questionnaire and send it back in a sealed envelope to a secretary within the company. In the other two branches, the researchers asked employees in person to participate and collected the questionnaire one or two days later. The response rates were 45, 100, and 100%, respectively. The respondents were evenly distributed over the different conditions within all three branches. A multivariate analysis of variance with Branch as the independent variable and Negative Affect, Exit, Neglect, and

Aggressive Voice as the dependent variables revealed no differences among the three branches, $F(8, 216) = 1.49$, n.s.

Vignette

The situation described in the vignette closely resembled the actual situation the employees were facing. Management of the company believed that task enlargement for each employee would strengthen the company's position in the market. The vignette, which was based on a vignette developed by Barling and Phillips (1993), read as follows (the manipulated information is printed in italics):

Imagine yourself as an employee working at division 1 of company X, a company which sells telephones and faxes. Company X has to strengthen its market position because there are a lot of competitors on the Business Communications market at the moment. So, if Company X wants to remain on the Business Communications market, something needs to be done. Company X is currently arranging long-term strategies to maintain and strengthen its position on the market.

Formal procedural justice

After

(low) *a comprehensive discussion among senior management, the company announced during a special meeting for all the employees*

(high) *negotiations between management and the union, both senior management and union representatives met with all the employees, explained the need for some action, and jointly announced*

that there would be an increase of duties for each employee in division 1. So employees in division 1 have to perform an additional task next to the tasks they're already performing.

Distributive Justice

The additional task policy

(low) *doesn't have a lot of consequences for the employees in division 1. They keep the same salary and their future in the company remains uncertain as there is no guarantee that the additional task policy will strengthen the company's position on the market.*

(high) *does have consequences for the employees in division 1. Their salary will rise 10% and their future in the company is as safe as there is a guarantee that the additional task policy will strengthen the company's position on the market.*

Interactional Justice

After the announcement of the additional task policy you and your co-workers met

(low) *briefly with your line manager who repeated the need for the additional task policy. There was no discussion about the need for the additional task policy, and your line manager did not listen to the concerns of you and your co-workers.*

(high) *with your line manager who repeated the need for the additional task policy. After all, you and your co-workers had an open and honest discussion for an hour about the need for the additional task policy, during which your line manager listened to your concerns.*

Measures

Manipulation Checks. After reading the vignette, the employees responded to the following manipulation checks. *Formal procedural justice:* The decision

to adopt task enlargement was made after (1) comprehensive discussion among senior management, or (2) negotiation between senior management and union. *Distributive justice*: The consequences of task enlargement for the employees personally are (1) the same salary and their future in the company remains as unsure as it was, or (2) a salary increase and their future in the company will be safe. *Interactional justice*: In the meeting with your supervisor, (1) your supervisor only repeated the need for task enlargement. Your supervisor did not listen to your and your coworkers' concerns, or (2) your supervisor repeated the need for task enlargement and took the time to listen to your and your coworkers' concern.

State Negative Affect. This was assessed by the Negative Affect Schedule (Watson *et al.*, 1988). This scale has been validated extensively (e.g., Watson *et al.*, 1988). After responding to the manipulation checks, the employees were asked,

Imagine yourself working in Company X, the company that just has been described above. The company wants to strengthen their market position and therefore they have made the decision to enlarge the tasks of you and your co-workers. Indicate in what extent you felt as described below when you read about the task enlargement decision.

Examples of feelings included distress, hostility, and irritability. Response categories varied from (1) *or not at all very slightly* to (5) *extremely*. Cronbach's alpha was .85.

Destructive Responses. As in Study 1, destructive responses were measured with scales developed by Hagedoorn *et al.* (1999). After filling out the Negative Affect Schedule, employees read,

Imagine that you are in the situation in Company X and that task enlargement has been implemented in the way described in the scenario. Listed below are several statements. Would you indicate on the scales next to the statements how likely it is that you would react in the ways described?

The general stem that followed was, "How likely is it that you . . . ?" In this sample, Cronbach's alphas of the subscales Exit, Neglect, and Aggressive Voice were .86, .72, and .63, respectively.

Results

Manipulation Checks

Cross-tabulation revealed that only five employees responded incorrectly to at least one manipulation check. These five employees, including an outlier with regard to age (see Sample and Procedure section), were excluded from the analyses, resulting in a final sample of 114 employees. It can be concluded that all the manipulations were successful.

Table IV. Summary of Analysis of Variance for State Negative Affect

	<i>F</i> (1, 106)
Distributive Justice (<i>D</i>)	11.42***
Procedural Justice (<i>P</i>)	0.00
Interactional Justice (<i>I</i>)	40.59***
<i>D</i> × <i>P</i>	22.37***
<i>D</i> × <i>I</i>	0.22
<i>P</i> × <i>I</i>	18.53***
<i>D</i> × <i>P</i> × <i>I</i>	0.00

* $p < .05$; ** $p < .01$; *** $p < .001$.

Testing the Mediation Model

According to Baron and Kenny (1986), perfect mediation exists when four conditions are met. First, the independent variables (the justice variables) must be related to the mediator (state negative affect). Second, the independent variables must be related to the dependent variable (destructive responses). Third, there must be a relationship between the mediator and the dependent variable. Fourth, the previously significant relation between the independent variable and the dependent variable (condition 2) is no longer significant after controlling for the mediator.

An analysis of variance (ANOVA) with Distributive justice (low vs. high), Formal procedural justice (low vs. high), and Interactional justice (low vs. high) as independent variables and State Negative affect as the dependent variable revealed two main effects (see Table IV). The main effect of distributive justice indicates that employees who received an unfavorable outcome reported more negative affect than did employees who received a favorable outcome ($M = 2.11$, $SD = 0.73$ vs. $M = 1.77$, $SD = 0.62$). In a similar vein, low interactional justice caused more negative affect than did high interactional justice ($M = 2.26$, $SD = 0.62$ vs. $M = 1.62$, $SD = 0.62$). No main effect of formal procedural justice was observed. In line with the expectations, however, this factor interacted with distributive justice. When confronted with an unfavorable outcome, negative affect was induced particularly when procedural justice was low (see Fig. 2), $t(54) = 2.27$, $p < .05$. When procedural justice was high, no difference was observed between employees who received an unfavorable outcome and those who received a favorable outcome, $t(56) = .48$, n.s. An unexpected result was that among employees receiving a favorable outcome, more negative affect was reported by those in the high procedural justice condition as compared to those in the low procedural justice condition, $t(56) = 3.07$, $p < .01$.

In contrast to our expectations, the two-way interaction between distributive and formal procedural justice could not be qualified by the third factor of interactional justice (see Table IV). However, an unexpected two-way interaction

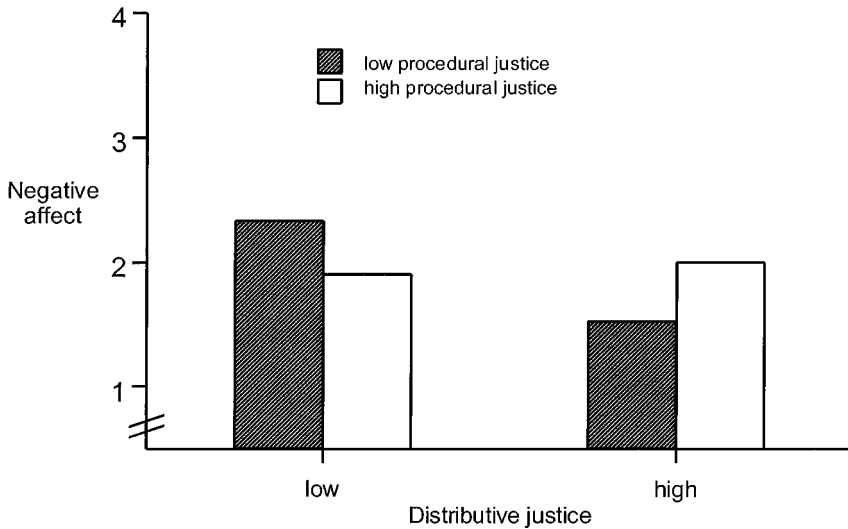


Fig. 2. Interaction between Distributive and Procedural Justice on state negative affect.

indicates that the main effect of interactional justice can be qualified by procedural justice. Low interactional justice led to more negative affect in combination with high procedural justice than in combination with low procedural justice, $t(55) = 2.60, p < .01$.

To test Baron and Kenny’s (1986) second condition of a mediator model, a multivariate analysis of variance (MANOVA) was conducted with Distributive justice (low vs. high), Formal procedural justice (low vs. high), and Interactional justice (low vs. high) as independent variables and Exit, Neglect, and Aggressive Voice as dependent variables. All three main effects were significant at the multivariate level (see Table V). The significant main effects at the univariate level were all in the expected direction (see *Hypothesis 1*): as compared to high justice, low justice led to a higher intent to react destructively in the form of Exit, Neglect, and Aggressive Voice. Note that the main effect of interactional justice on all three dependent variables is consistent with the results found in Study 1 (cf. Table III).

Furthermore, the hypothesized two-way interaction between distributive and procedural justice on exit found in Study 1 (see Fig. 1) was replicated in Study 2. As shown in Fig. 3, employees who faced an unfavorable outcome were much more inclined to respond with exit when the formal procedures were unfair than when these procedures were fair, $t(54) = 4.55, p < .001$. Figure 3 also shows that in the latter case, the intent to quit was as low as in the conditions in which employees received a favorable outcome, $t(54) = .20, n.s.$ and $t(56) = .02, n.s.$, for low and high procedural justice, respectively. Thus, in both Study 1 and Study 2,

Table V. Summary of Analysis of Variance for Exit, Neglect, and Aggressive Voice

	Multivariate $F(3, 104)$		Univariate $F(1, 106)$
Distributive Justice (<i>D</i>)	7.48***	Exit	14.58***
		Neglect	18.05***
		Aggressive Voice	2.98
Procedural Justice (<i>P</i>)	8.12***	Exit	15.02***
		Neglect	1.81
		Aggressive Voice	1.43
Interactional Justice (<i>I</i>)	16.24***	Exit	7.91**
		Neglect	4.86*
		Aggressive Voice	48.71***
<i>D</i> × <i>P</i>	5.90***	Exit	16.14***
		Neglect	7.53**
		Aggressive Voice	7.77**
<i>D</i> × <i>I</i>	5.47**	Exit	0.06
		Neglect	1.15
		Aggressive Voice	9.06**
<i>P</i> × <i>I</i>	1.24		
<i>D</i> × <i>P</i> × <i>I</i>	2.66*	Exit	6.81**
		Neglect	0.04
		Aggressive Voice	0.78

* $p < .05$; ** $p < .01$; *** $p < .001$.

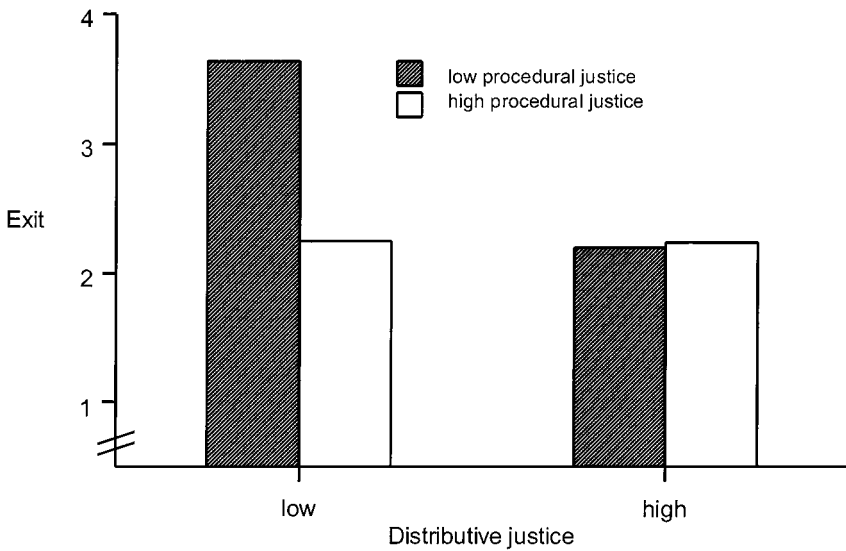


Fig. 3. Interaction between Distributive and Procedural Justice on exit.

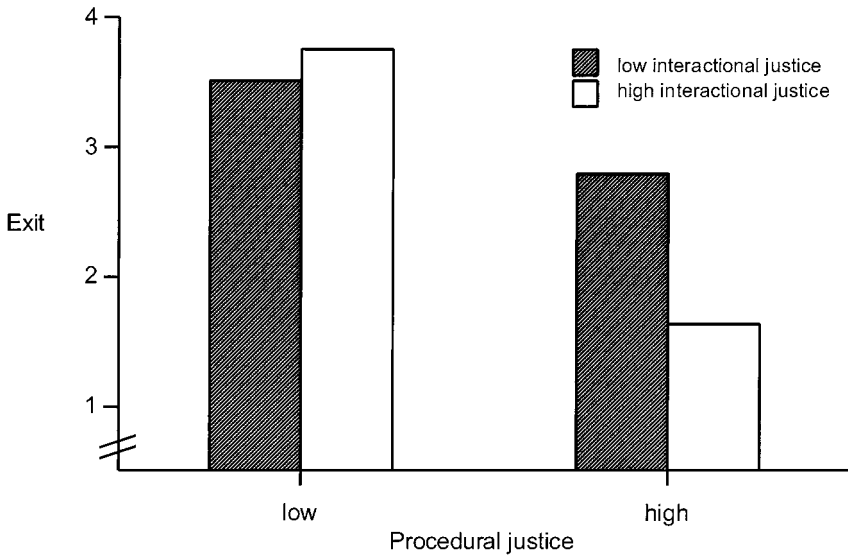


Fig. 4. Interaction between Procedural Justice and Interactional Justice on exit, under the condition of low distributive justice.

support has been obtained for *Hypothesis 2* with regard to the exit response. This replication is also of interest because a similar effect was found with state negative affect as the dependent variable (see Fig. 2), suggesting that this particular effect of justice on exit might be mediated by state negative affect.

The results of Study 2 partially support *Hypothesis 3*. In contrast to Study 1, interactional justice could qualify the two-way interaction between distributive and procedural justice on exit. Specifically, *only under the condition of low distributive justice*, an interaction between procedural and interactional justice was observed. As hypothesized, employees tended to react destructively to the unfavorable outcome when both procedural and interactional justice were low (see Fig. 4). However, this tendency was also observed when either procedural justice, $t(26) = .61$, n.s., or interactional justice, $t(26) = .61$, n.s., was low. Figure 4 suggests that a strong intent to quit due to low distributive justice can only be reduced when both procedural and interactional justice are high. In this condition, the intent to quit was significantly lower than the intent to quit in the conditions in which procedural and interactional justice were low–low, $t(25) = 7.72$, $p < .001$, low–high, $t(25) = 6.00$, $p < .001$, and high–low, $t(26) = 2.77$, $p < .01$, respectively.

The other two-way interactions reported in Table V generally resemble the two-way interaction pictured in Fig. 3. That is, the intent to react destructively was highest under the condition of low distributive justice combined with low procedural *or* low interactional justice. However, these effects are of less interest

Table VI. Correlations, Means, and Standard Deviations of all the Variables

Variables	2	3	4	5	6	<i>M</i>	<i>SD</i>
Educational Level	-.13	-.02	.11	.08	-.08	3.23	0.96
Age	—	.05	-.05	.05	.14	39.98	9.57
State Negative Affect		—	.44*	.50*	.59*	1.94	0.69
Exit			—	.59*	.46*	2.57	1.17
Neglect				—	.47*	1.80	0.75
Aggressive Voice					—	3.16	0.84

* $p < .01$.

because these interactions (1) have not been found in Study 1, and (2) the interaction between distributive and interactional justice had no effect upon state negative affect (i.e., the first condition of the mediator model was not met).

The third condition of a mediation model is that the mediator and the dependent variables are significantly linked. As can be seen in Table VI, state negative affect was significantly related to all three destructive responses, Exit, Neglect, and Aggressive Voice. Note that the correlations between the behavioral reactions are very similar to those found in Study 1 (cf., Table II); only the positive association between exit and neglect was found to be significantly stronger in Study 2 than in Study 1, $z = -2.84$, $p < .01$. Furthermore, the means on exit are more or less identical, $t(356) = 1.42$, n.s., but the means on neglect and aggressive voice are somewhat higher than in Study 1, $t(356) = 2.67$, $p < .01$, and $t(356) = 5.31$, $p < .001$, respectively. Note that no significant relationships existed between educational level and age, on the one hand, and all other variables, on the other.

The fourth and final condition to test the proposed mediation model is that the previously significant relations between the justice manipulations and a destructive reaction is no longer significant after controlling for state negative affect. Because tentative support has been found only for the models pictured in Fig. 5, the test of the fourth condition can be restricted to these two models. A MANCOVA with Distributive justice (low vs. high), Formal procedural justice (low vs. high), and Interactional justice (low vs. high) as independent variables, and Exit, Neglect, and Aggressive Voice as dependent variables, and State Negative Affect as the covariate revealed that the multivariate interaction effect between distributive justice and procedural justice on the behavioral intentions is no longer significant, $F(3, 104) = 2.37$, n.s. Thus, *Hypothesis 4* is partially supported; that is, support has been found for the model in which state negative affect mediates the interaction effect between distributive and procedural justice on exit (see Fig. 5). In contrast, the multivariate main effect of interactional justice on the behavioral reactions was strongly reduced by controlling for state negative affect, but nevertheless still significant, $F(3, 104) = 6.53$, $p < .001$. At the univariate level, this effect could be completely ascribed to aggressive voice, $F(1, 105) = 17.57$, $p < .001$. However,

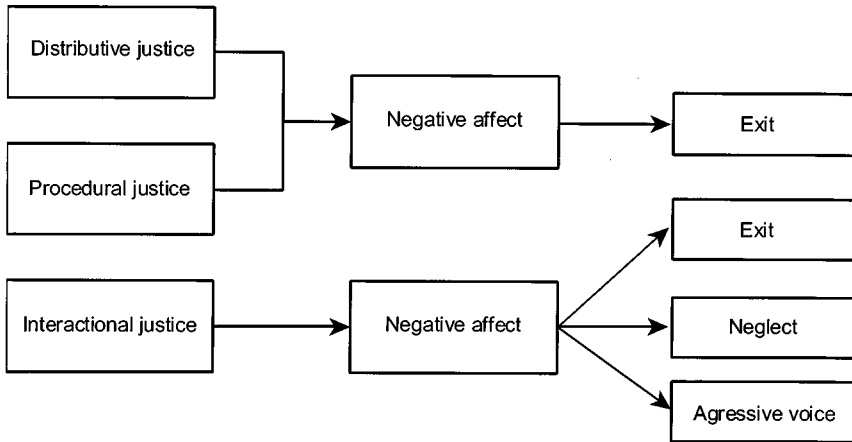


Fig. 5. The two models that received support in Study 2.

this univariate effect was also strongly reduced, suggesting that the link between interactional justice and aggressive voice was partially mediated by state negative affect (Baron and Kenny, 1986). Perfect mediation is suggested by the finding that the effect of interactional justice on exit and neglect was no longer significant, $F(1, 105) = 1.27$, and $F(1, 105) = 0.00$, respectively.

DISCUSSION

In both Study 1 and Study 2, it was found that all three forms of injustice, and interactional injustice in particular, elicit higher intentions to react destructively in the form of exit, neglect, and aggressive voice. The link between interactional justice and the three destructive responses was perfectly (exit and neglect) or partially (aggressive voice) mediated by state negative affect. Furthermore, an interaction between distributive and procedural justice was observed in both studies, suggesting that an unfavorable outcome evokes negative affect when employees believe that the unfavorable outcomes results from an unfair procedure (cf. Brockner and Wiesenfeld, 1996). Under these conditions, employees appeared to be more likely to quit. Low interactional justice could qualify this interaction effect of distributive and procedural justice on exit, but only in Study 2. However, in contrast to the pattern of the three-way interaction reported by Skarlicki and Folger (1997), only a combination of high procedural and high interactional justice could prevent employees' intentions to react destructively in terms of exit to an unjust outcome. Moreover, this hypothesized three-way interaction was not very robust: (1) no evidence was obtained that this relationship was mediated by state negative affect, and (2) no effect was found on neglect and aggressive voice. Obviously, more

research should be done to test the robustness of Skarlicki and Folger's finding that procedural and interactional justice are interchangeable.

Anyhow, the present results also clearly indicate that it is appropriate and useful to differentiate among distributive, procedural, and interactional justice. The general picture is that destructive responses can be best predicted by the traditional outcome \times procedure interaction, and by interactional injustice (see Fig. 5). Exploratory analyses by Folger and Skarlicki (1998), not reported in the Skarlicki and Folger (1997) paper but in a chapter published one year later, also suggest that interactional justice is a dominant predictor (cf. Barling and Phillips, 1993; Moorman, 1991; Tyler and Bies, 1990). Moreover, they discuss a study (Folger *et al.*, 1996, cited in Folger and Skarlicki, 1998) that demonstrates a strong main effect of interactional justice on assaults; that is, employees who felt treated with disrespect and indignity at their facility reacted more aggressively (assault incidents) in subsequent months. The present study likewise demonstrates that low interactional justice elicits negative affect and a strong intent to change the situation by means of aggressive voice, independent of perceived distributive and procedural injustice. A recent study by VanYperen *et al.* (1999) also emphasized the importance of a fair and supportive relationship between supervisor and subordinate. The more employees felt supported by their supervisor, the more they actually exhibited so-called organizational citizenship behaviors. In an attempt to explain this strong main effect of interactional justice, Folger and Skarlicki (1998, p. 74) speculated that feeling unfairly treated by your supervisor "... typically provides some of the clearest inferences about the intentional component so crucial to moralistic aggression as a counter-response to unfair conduct." As suggested by the unexpected interaction between procedural and interactional justice on negative affect, this might be particularly true in situations of procedural fairness. Under these circumstances, supervisors may be blamed even more for their unfair interpersonal behavior. Note that this contradicts the argument of Skarlicki and Folger (1997) that procedural justice buffers negative behavioral and psychological reactions when the supervisor's interpersonal behavior is unfair.

The present study replicates the well-documented two-way interaction between distributive and procedural interaction with exit as the dependent variable (Brockner and Wiesenfeld, 1996). The contribution of this research is that it shows that this particular interaction as well as perceived low interactional justice give rise to destructive responses through an increase in negative affect. Although justice theories assume that perceptions of injustice lead to behavioral reactions via state negative affect (e.g., Adams, 1965), empirically based mediation models have never been reported, particularly not with regard to *interactions* between justice variables. The present study is a preliminary attempt to fill this gap. The next step may be to examine the impact of perceptions of injustice and state negative affect on actual behavior.

One of the benefits of this research is that two different methodologies were employed, compensating each other's weaknesses. Scales used in survey studies

are subject to response bias, which tend to inflate main effects at the cost of interaction effects. Furthermore, no causal interferences can be made on the basis of cross-sectional survey data. In contrast, in experimental vignette studies, participants are asked to respond to a fictitious situation. Such a methodology maximizes internal validity, but the external validity or generalizability is cause for some concern. Considering the consistent outcomes between the survey study and the vignette study, however, at least some level of generalizability is achieved. Moreover, the results are rather consistent with other field studies (e.g., Folger and Skarlicki, 1998; Greenberg, 1990; Moorman, 1991). Reasons for the consistent results may be the use of a real-life sample in the vignette study, and the fact that the vignette confronted employees with an actual and realistic problematic event. Indeed, a comparison of Table II with Table VI suggests that the responses of the maternity nurses who were asked to respond to a problematic event in their own work environment are very similar to the responses of employees to the actual, problematic event described in the realistic, but fictitious scenario. However, the means on the neglect and aggressive voice scale suggest that employees feel more constrained to express neglect and aggressive voice intentions in a real setting as compared to the fictitious setting. This appears not to be a gender effect because the males and females in the sample in Study 2 did not differ with regard to either exit, $t(112) = .33$, n.s., neglect, $t(112) = .09$, n.s., or aggressive voice, $t(112) = .05$, n.s. Furthermore, additional analyses on the data of Hagedoorn *et al.* (1999) revealed no differences among female maternity nurses, female teachers, and male teachers on exit, $F(2, 225) = 1.32$, n.s. In contrast, differences were found with regard to neglect and aggressive voice, which could be completely ascribed to the differences between both professional groups' maternity nurses and teachers (i.e., the differences between male and female teachers were not significant). The means on neglect were $M_{\text{male teachers}} = 2.18$, $M_{\text{female teachers}} = 2.00$, $M_{\text{female nurses}} = 1.63$, respectively, $F(2, 224) = 9.27$, $p < .001$, and on aggressive voice $M_{\text{male teachers}} = 3.14$, $M_{\text{female teachers}} = 3.12$, $M_{\text{female nurses}} = 2.45$, respectively, $F(2, 224) = 14.75$, $p < .001$. Thus, within one profession or organization, no differences were found between males and females on exit, neglect, and aggressive voice. Rather than methodology and gender, *profession* seems to be the variable that can explain the differences between both samples in neglect and aggressive voice. Apparently, maternity nurses do not feel like responding with neglect and aggressive voice. One of the reasons may be that in this profession (and human service professions in general), a neglect response causes harm to recipients rather than to the organization. Secondly, aggressive voice as a response to low interactional justice is less likely to occur among maternity nurses because interactions with superiors are infrequent. Typically, maternity nurses meet their supervisor only during regular state-of-the-business work group meetings (10–15 members) of 2–3 h every 4–6 weeks (VanYperen, 1998).

It has been shown that vignette studies can be useful to test mediation models in a real-life sample. For practical purposes, for example, when organizations

consider different options to implement a particular measure or policy, an experimental design can be developed in which the different scenarios are described. The present results suggest that task enlargement without a salary increase and with an uncertain future will be accepted by employees as long as they feel that a fair procedure has been followed, including negotiations between management and the union and a clear and jointly announced explanation for the actions that have to be taken. Probably most crucial is the way supervisors treat their subordinates (cf. Greenberg and Alge, 1998). Supervisors can counter state negative affect and destructive behavior among their subordinates by explaining the need for the measures that have to be taken, by listening to the concerns of their subordinates, and by being open and honest towards them. Because outcomes very much depend on external factors, and because formal procedures in organizations often appear to be rather rigid, improving interpersonal treatment may be the most promising way for supervisors to promote justice in the workplace.

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