The Distributive Side of Interactional Justice:
The Effects of Interpersonal Treatment on
Emotional Arousal

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The importance of reactions to perceptions of unfair treatment in the workplace cannot be understated. As predicted by Adams' (1963, 1965) equity theory, which has increased in importance over the last two decades (Miner, 2003), employees often respond to inequities in wage and other resource distributions by lowering performance or by increasing absenteeism, theft, and other retaliatory behaviors that are generally detrimental to organizational functioning (Greenberg, 1987, 1990, 1993b). In addition to Adam's work with distributive justice, attention has been directed towards the more subtle and long-range effects of procedural justice. Fair procedures, defined as those that are unbiased, based on accurate information, applied consistently, representative of all parties, correctable, and based on ethical standards (Leventhal, 1980) are associated with such positive organizational outcomes as organizational commitment and trust in supervision (Folger and Konovsky, 1989; Konovsky and Cropanzano, 1991) and organizational citizenship behavior (Moorman et al., 1993). Subsequent to the identification of the fundamental effects of distributive and procedural justice, attention shifted to combined effects. Notably, the outcome × procedure interaction, whereby negative responses to unfair or unfavorable outcomes are attenuated by perceptions of procedural fairness, has achieved substantial empirical support (Brockner and Wiesenfeld, 1996; Greenberg, 1987). In addition to investigations of the independent and combined effects of each aspect of justice, contemporary research has begun to address negative emotional reactions to perceived injustice in the workplace and the presumed inter-
vention between emotional states engendered by injustice and employee behaviors (Weiss et al., 1999).

A third aspect of organizational justice, interactional justice, or the perceived fairness of interpersonal treatment (Bies, 1987), appears to have a considerable but inadequately specified influence on perceptions of overall fairness. For example, the quality of interpersonal treatment is associated with acceptance of, and affect towards, authorities (Tyler, 1989), and appears to serve a heuristic value in determining the fairness of organizational procedures and the trustworthiness of decision makers (Brockner, 2002; Lind, 2001). Although most researchers agree that interactional justice can have an impact on organizationally-relevant outcomes, there is considerable controversy regarding its position in the pantheon of organizational justice. While interactional justice is often considered a facet of procedural justice (Brockner and Wiesenfeld, 1996; Lind and Tyler, 1988), or a substitute for procedural justice (Skarliki and Folger, 1997), Greenberg notes that "... attempts to fold interactional justice into procedural justice may be seen as a premature move toward parsimony" (1993b: 99). Manipulations of procedural justice that involve variations in interactional justice may be confounded, and "... some of the strongest effects attributed to procedural justice may have emerged when interactional justice rather than formal procedures were manipulated" (Barling and Phillips, 1993: 650).

The purpose of this study was to investigate whether interactional justice can generate effects similar to distributive justice, and to distinguish those effects from those attributed to procedural causes. The identification of effects that are similar to those of distributive justice, combined with extant knowledge of effects associated with procedural justice, will enhance our understanding of interactional justice and build a foundation for gradual improvement in construct validity, research design, and resulting internal validity of research findings. Moreover, such a distinction is necessary should we hope to understand the effects of interpersonal treatment that occur in the context of work relationships. A pivotal question is whether interactional injustice can evoke the emotional and retaliatory reactions associated with unjust workplace distributions of a more tangible, economic nature. Given the potential for aggressive and retaliatory behaviors, presumed to result from negative emotional reactions to unfair distributions, it is vitally important to identify if, and under what conditions, rude or unfair interpersonal treatment will be perceived as an intangible outcome and, as such, engender organizationally disruptive behaviors.

We begin with a brief review of theory and evidence linking interactional justice to prevalent conceptualizations of procedural and distributive justice. We then develop and test our position that negative emotional reactions to interactional injustice are more similar to the experience of distributive injustice than procedural injustice. Further, hypotheses predicting interactive effects between interactional and procedural justice similar to those found between distributive and procedural justice on emotional and behavioral responses are then presented and tested.
Interactional Justice and Procedural Justice

It should not be surprising that interactional justice is frequently considered to be an aspect of procedural justice. Unlike distributions, which are easily evaluated by recipients in terms of their desirability, employees may not be privy to the procedural criteria used in determining how organizational resources are allocated. Thus, one aspect of fair interpersonal treatment is the provision of explanations about procedures that assist individuals in determining whether appropriate procedures were used in decisions that concern them. Consequently, certain facets of interactional justice, including the provision of information about actual decision-making procedures, have been found to be highly correlated with perceptions of procedural justice (Greenberg, 1993a; Lind and Tyler, 1988).

In a study that simultaneously assessed the effects of distributive, procedural, and interactional justice, Skarlicki and Folger (1997) found a three-way interaction indicating that interactional and procedural justice may substitute for one another. The interaction between distributive and procedural justice was only significant at low levels of interactional justice while the interaction between distributive justice and interactional injustice was only significant at low levels of procedural justice. However, the operationalization of interactional justice as observations of interpersonal treatment as well as the provision of explanations for decisions may have confounded results and limited the conclusions that can be drawn from this study.

The group-value model of procedural justice provides an additional explanation for the effects of interpersonal treatment within a procedural justice framework (Lind and Tyler, 1988). The model asserts that perceptions of procedural justice are based, in part, on interpersonal treatment that conveys that the intentions of decision makers are benevolent and trustworthy. Moreover, polite and respectful treatment during the enactment of procedures conveys the self-worth and status of individuals, thereby fulfilling important socioemotional and group identification motives. While self-interest models of procedural justice, such as that formulated by Leventhal (1980), assume that procedures are valued for their instrumentality in achieving fair outcomes, the group value model posits that perceptions of belongingness and acceptance by the group are important non-instrumental effects of procedures.

Importantly, there is direct evidence that interactional justice does not always correlate with procedural justice judgments, despite their superficial similarity. Greenberg (1993b), for example, found that while the validity of information provided by decision makers as the basis for decision making (referred to as informational justice) was associated with perceptions of procedural fairness, the degree of interpersonal sensitivity expressed by decision makers (referred to as interpersonal justice) was not a significant source of variance in procedural justice judgments. Similarly, in a study of customer responses to unfair treatment in the retail setting, interactional justice, when operationalized as polite and respectful treatment, was found to be distinct from procedural justice (Blodgett et al., 1997). More recently, interactional and procedural justice were
found to form distinct factors in employee survey data in the hotel industry (Simons and Roberson, 2003).

**Interactional Justice and Distributive Justice**

Importantly, extant theories of distributive justice hold that outcomes may include intangible resources afforded through interpersonal treatment as well as more tangible outcomes. As noted by Adams, “Relevant positive outcomes for one or both parties may consist of affection, love, formal courtesies, . . . Insult, rudeness, and rejection are the other side of the coin” (1965: 278). Importantly, Adams defines an outcome in terms of the recipient's subjective assessment of relevancy and marginal utility, with no qualification as to the tangibility or economic value of the resource. From this perspective, intrinsic rewards that result from fair and respectful interpersonal exchange would likely be perceived as marginally useful, particularly when relational needs or motives are salient. Moreover, Bies suggests that the quality of interpersonal treatment may factor directly into the equity judgment by altering or supplanting the equity ratio; a high level of interactional justice may be “. . . more critical than the objective ‘input-outcome’ ratio” (1987: 295). In a recent study, Blodgett and colleagues (1997) found that a significant main effect of distributive justice was present only when interactional justice was high. When interactional justice was low, respondents reported negative responses regardless of the level of distributive justice. They suggest that interactional and distributive justice are related in a compensatory fashion. Further, and in support of Bies’ suggestions (above), their results implied that low interactional justice created a floor effect, such that the effect of rude treatment was so pervasive that the level of economic outcomes was inconsequential. They note that these results are consistent with research on the impact of emotions on complaint behavior.

A critical challenge for researchers is how to test the competing hypotheses that interactional justice represents a component of either distributive or procedural justice. As noted by Colquitt, Conlon, Wesson, Porter, and NG (2001), the field of organizational justice has not adequately addressed construct discrimination with respect to distributive and interactional justice and particularly with respect to procedural and interactional justice. We suggest that the differential effect of perceptions of distributive and procedural fairness on emotional arousal is a pivotal distinction that is useful in determining when interactional justice has been perceived as an issue of distributive rather than procedural justice. Consistent with predictions of equity theory (Adams, 1963, 1965) and Cropanzano and Folger's (1991) two component model of justice, the perception of a distributive injustice has been shown to create an adverse emotional state referred to as “inequity tension” (Clayton, 1992; Markovsky, 1988). Further, the two component model predicts that the perception of unjust procedures, in the absence of an associated distributive injustice, will evoke very little, if any, arousal or resentment (Cropanzano and Folger, 1991; Folger and Martin, 1986; Folger, Rosenfield, Rheume and Martin, 1983; Leventhal, 1980; Thibaut and Walker, 1975). Simply put, people are not likely to become emotion-
ally aroused about unfair organizational procedures that are inco-
sequential.

In the few studies that have (1) assessed the effects of both distributive justice and procedural justice on negative emotional arousal and (2) have not confounded interactional with procedural justice, the perception of unjust or unfavorable outcomes has consistently led to emotional arousal (i.e., anger, resentment, and discontent), whereas emotional arousal failed to occur as a result of perceptions of procedural unfairness alone (Folger and Martin, 1986; Folger, Ros-
enfield, Rheaume and Martin, 1983; Folger, Rosenfield and Robinson, 1983; Greenberg, 1987). In Brockner and colleagues’ three-way analysis (previously discussed), distributive and interactional justice had significant effects on intentions to complain that were not apparent for procedural justice. As suggested by Weiss, Suckow, and Cropanzano, “... outcomes, either favorable or unfavorable ... set the initial affective direc-
tion of the emotion” (1999: 787). Given both theory and empirical findings indicating that the experience of an actual or expected unfair outcome is necessary to evoke emotional arousal (Baron, 1993; Greenberg, 1993b), we propose that the occurrence of arousal in response to unfair interpersonal treatment can be used as an empirical indicator that the quality of interpersonal treatment has been perceived as a relevant outcome of exchange and, as such, is more similar to distributive than procedural justice. Thus, our first two hypotheses predict that the effects of interactional justice on emotional arousal should parallel those of distributive justice:

Hypothesis 1: Distributive justice and interactional justice will each have main effects on expressions of negative emotion.

Hypothesis 2: There will be no independent effect of procedural justice on expressions of negative emotion.

A second, and somewhat more indirect, test of whether interactional justice is appropriately considered to be an aspect of distributive justice is to determine whether procedural justice moderates the effects of interactional justice. Cropanzano and Folger’s (1991) two-component model of justice, based on earlier work with referent cognitions theory (Folger and Martin, 1986), predicts an interaction between distributive justice and procedural justice such that when distributions are unfair or otherwise unfavorable but the procedures used to arrive at the decision are fair, people may exhibit dissatisfaction but do not tend to report feelings of resentment associated with experiences of distributive injustice. Further, when procedures are judged to be fair, responses to distributive injustice are predicted to be constructive. On the other hand, if unfavorable outcomes result from procedural impropriety, people are predicted to respond vigorously and negatively to injustice. Following the analysis of 45 studies, Brockner and Wiesenfeld (1996) concluded that this fair process effect is robust. If interactional justice has effects similar to that of distributive justice, we would expect to find parallel effects when manipulations of interactional justice are substituted for those of distributive justice. More formally, we propose:

Hypothesis 3: Interactive effects between both distributive justice and procedural justice, and interactional justice and procedural justice, will occur such that for those in the low distributive or interactional justice conditions, expressions of negative
emotion will be significantly less for those in the high procedural justice conditions than for those in the low procedural justice conditions.

**Hypothesis 4a:** Among those for whom either distributive or interactional justice is low, those in the high procedural justice condition will report a greater tendency to respond in a constructive manner than those in the high procedural justice conditions.

**Hypothesis 4b:** Among those for whom either distributive or interactional justice is low, those in the low procedural justice conditions will report a greater tendency to respond in a negative or destructive manner than those in the high procedural justice conditions.

## METHOD

Two scenario experiments were administered to avoid potential confounding of distributive justice and interactional justice effects, which were shown to exhibit a moderate corrected correlation of .42 (Colquitt et al., 2001; Blodgett et al., 1997) on emotional reactions. This design was utilized to afford the high degree of experimental control necessary to establish causality while avoiding the exposure of subjects to the psychological distress associated with actual experiences of injustice. The first experiment tested the basic predictions of the two-component model with respect to distributive and procedural justice. The second experiment provided a test of hypotheses within the same hypothetical setting as the first, except that interactional justice was varied in place of distributive justice. Both experiments used 2 × 2 factorial designs that crossed high and low levels of distributive justice (Experiment 1) or high and low levels of interactional justice (Experiment 2) with high and low levels of procedural justice to test for the hypothesized outcome × procedure interactions.

### Sample

Subjects were 140 undergraduate students, 18 years of age or older, enrolled in a junior-level management course. Usable results were attained from 64 respondents with 16 subjects per condition for Experiment 1, and from 76 respondents with 19 subjects per condition for Experiment 2. Subjects were randomly assigned to one of the two experiments and to conditions within each experiment. Scenarios and post-scenario questionnaires containing the dependent variables were gender-matched to enhance subjects’ ability to identify with the focal character and to allow identification of subject gender for subsequent analysis. Scenarios and questionnaires were administered simultaneously in the classroom setting during one 50-minute class session. (These materials are available upon request from the lead author.) Students who chose to participate were required to sign consent forms indicating their agreement to participate in exchange for class credit.

### Procedures

For Experiment 1, each of the four scenarios represented one of four conditions of justice resulting from crossing high and low levels of distributive justice with high and low levels of procedural justice. In all scenarios, a highly successful start-up firm is in the process of regional expansion. Subjects were instructed to imagine that they were one of two employees who have applied for the position of regional manager of expanded operations.
Distributive justice was operationalized in terms of equity, rather than outcome favorability, and presented prior to variations in procedural justice. The subject was depicted as having contributed more inputs to the exchange (a higher level of education, longer tenure, performance of activities requiring greater responsibility, and a higher level of knowledge in finance) than the co-worker, in order to create a clear and unambiguous condition of inequity in the low distributive justice conditions. Variations in distributive justice were represented by the subject’s receipt of the position (high) or the referent’s receipt of the position (low). Variations in procedural justice were represented by the decision makers’ adherence to (high) or violation of (low) Leventhal’s (1980) accuracy and representativeness rules of procedural justice during a meeting among the owner and a group of investors in which the hiring decision was made. In the high procedural justice condition, both applicants were evaluated on the basis of information in their applications and on a diligent review of their past performance.

For example, in the high procedural justice scenario, the subject was informed that “...the group has spent a considerable amount of time reviewing your and Ann’s (or Dave’s, if the subject was male) applications, taking into consideration each of your credentials, as well as interpersonal skills.” In the low procedural justice condition, the selection was made quickly, without a review of applicants’ resumes and based on limited (one-shot) observations of each applicant’s performance. In this condition, the subject was informed that “...the group came to its decision to hire you (or the co-worker, in the low distributive justice condition) very quickly...everyone was exhausted after the long meeting and...no one felt like spending a lot of time reviewing the applications. It was clear...that your (or the co-worker’s, in the low distributive justice condition) impressive performance during the meeting was a determining factor in the promotion decision.

For Experiment 2, each of the four scenarios represented one of four conditions of justice resulting from crossing high and low levels of interactional justice with high and low levels of procedural justice. The hypothetical setting is the same as that used in Experiment 1. In all conditions, the project funds for the focal person’s major accounts are embezzled. Both the subject and referent are depicted as having roughly equivalent outcome/input ratios to avoid confounding the effects of distributive justice and interactional justice. The subject must temporarily turn the management of other accounts over to the referent while working outside the office to resolve the problem. This situation allowed for a differential opportunity for the employer to observe each party’s performance that is biased against the focal person. Because the subject is not on site, decisions concerning performance are less accurate and representative, or procedurally fair, than decisions concerning the referent’s performance. Variations in procedural justice are represented by the decision maker’s adherence to (high) or violation of (low) Leventhal’s (1980) accuracy and representativeness rules of procedural justice. In the high procedural justice condition, the subject was informed that “...the owner had repeatedly, but unsuccessfully, attempted to contact you throughout the preceding week for a progress report...the owner
was able to verify, through the bank and the insurance company, that you had applied for a short-term loan to cover the project’s operating expenses and had completed the necessary paperwork to settle the embezzlement claim. In the low procedural justice condition, the subject was informed that “... the owner had made no attempt to contact you, or anyone else (the client, bank, insurer, etc.) to find out what was going on.” Low interactional justice was represented by a low level of interpersonal sensitivity and rude treatment (Greenberg, 1993b) (i.e., the decision maker was unsympathetic, demanding, and unappreciative of the subject’s work). High interactional justice was represented by a high level of interpersonal sensitivity and respectful treatment (i.e., the decision maker was sympathetic, concerned, and appreciative of the subject’s work).

Measures

After reading the assigned scenario, each subject was asked to complete questionnaires that contained the dependent measures and manipulation checks. Each of the measures used seven-point Likert-type response scales. Scores for multiple-item indices were derived by averaging the scores of each index.

Manipulation Checks. For Experiment 1, two scales measuring the perceived level of distributive justice and procedural justice were used to measure effectiveness of manipulations. Perceptions of distributive justice were measured by a three-item scale adapted from Greenberg (1993b) (coefficient alpha = .90). These three items read: (1) “Do you think that the outcome of the promotion decision was fair to you?,” (2) “Do you think that the outcome of the promotion decision for the regional management position was appropriate?,” and (3) “To what extent was the outcome of the promotion decision in keeping with your standards of fairness?” Perceptions of procedural justice were measured by a three-item scale also adapted from Greenberg (1993b) (coefficient alpha = .95). These items read: (1) “Please refer to the last section of the case study entitled ‘The Decision-Making Process.’ How fair was the decision-making process leading to the determination of who should receive the regional management position?,” (2) “Please refer to the last section of the case study entitled ‘The Decision-Making Process.’ To what extent was a proper decision-making process used to determine who received the regional management position?,” and (3) “To what extent did decision makers attempt to base their promotion decision on accurate information about you and [name of referent]?” For Experiment 2, the effectiveness of interpersonal treatment manipulations was assessed using a three-item scale adapted from Greenberg (1993b) (coefficient alpha = .89). These items read: (1) “To what extent was the owner concerned about your fair treatment?,” (2) “How fair was the owner in considering your needs and well-being?,” and (3) “To what extent did the owner give fair consideration to your personal feelings?” Procedural justice manipulations were tested using the same scale used in Experiment 1 (coefficient alpha = .88).

Dependent Variables. Dependent variables included negative affective reactions and intentions to respond in either a constructive or destructive
manner. The primary dependent variable, negative affective reactions, was assessed with a three-item scale that measured the degree of experienced anger, resentment and bitterness, adapted from Folger, Rosenfield, Rheaume, and Martin (1983). These items read: (1) "Would you feel angry about what happened?,” (2) "Would you feel resentful about what happened?," and (3) "Would you feel bitter about the way things turned out?" The coefficient alpha for this scale was .92 in Experiment 1 and .93 in Experiment 2. Four single-item indices designed specifically for this study were used to test for the constructiveness (two items) or destructiveness (two items) of behavioral intentions in response to the scenarios. Items measuring subjects' intentions to behave constructively assessed their intentions to improve effort and work-related skills and were slightly re-worded to fit with conditions depicted in scenarios for Experiments 1 and 2. In Experiment 1, the two items measuring intentions to respond constructively read: (1) "In response to this situation, would you work at improving your interpersonal skills?” and (2) "In response to this situation, would you try to increase your work skills that lead to advancement in this company?” In Experiment 2, the two items that assessed intentions to respond constructively read: (1) "In response to this situation, would you put more effort into making sure that the boss was aware of your work activities?” and (2) "In response to this situation, would you try to communicate more effectively with the owner in the future?” Items assessing intentions to respond destructively for both experiments read: (1) In response to this situation, would you consider looking for a better job elsewhere?” and (2) “In response to this situation, would you be inclined to work less hard for the company than you did before?”

RESULTS

Results of this study confirmed the basic predictions of dual-component models of justice with respect to emotional reactions to injustice while only partially supporting predicted interactions. Separate ANOVAs indicated that manipulations of distributive, interpersonal and procedural justice across conditions were effective. For Experiment 1, subjects in the high distributive justice conditions scored significantly higher on the distributive justice scale than those in the low distributive justice conditions with mean scores of 5.56 and 3.15, respectively, \( F(1,64) = 64.60, p < .001 \). Likewise, subjects in the high procedural justice conditions scored significantly higher on the procedural justice scale than those in the low procedural justice conditions with mean scores of 5.07 and 2.62, respectively, \( F(1,64) = 60.72, p < .001 \). Sample variances for scores on the distributive justice scale (\( s^2 = 3.11 \)) and procedural justice scale (\( s^2 = 3.08 \)) were not significantly different (\( t(64) = .06 \) (n.s.)), indicating that manipulations of both independent variables were of roughly equivalent strength (Cooper and Richardson, 1986.) For Experiment 2, subjects in the high interpersonal treatment conditions scored significantly higher on the interpersonal treatment scale (\( M = 4.85 \)) than those in the low interpersonal treatment scale (\( M = 2.43 \)), \( F(1,76) = 95.68, p < .001 \). Similarly, subjects in the high procedural justice conditions scored significantly higher on the proce-
dural justice scale (M = 4.18) than those in the low procedural justice conditions — (M = 2.75), F(1,76) = 21.25, p < .001. Sample variances for scores on both variables were not significantly different for interpersonal treatment (s^2 = 2.63) and for procedural justice (s^2 = 2.35) (t(76) = .64 (n.s.)). Although subjects were predominantly male (67% in Experiment 1 and 63% in Experiment 2), gender did not significantly influence emotional reactions to the scenarios — for Experiment 1, F(1,64) = .84 (n.s.) and for Experiment 2, F(1,76) = .119 (n.s.).

Consistent with Hypothesis 1, which predicted that distributive justice and interactional justice will each have main effects on expressions of negative emotion, significant main effects on negative emotion were found for both distributive and interactional justice (see Table 1). In Experiment 1, scores for negative emotion were much greater for those in the low distributive justice conditions than for those in the high distributive justice conditions — F(1,64) = 102.91, p < .001. Likewise, in Experiment 2, scores for negative emotion were greater for those in the low interactional justice conditions than for those in the high interactional justice conditions — F(1,76) = 179.66, p < .001. Further, procedural justice failed to produce a significant main effect on negative emotion in either experiment — for Experiment 1, F(1,64) = 2.1 (n.s.) and for Experiment 2, F(1,76) = 1.52 (n.s.) — supporting Hypothesis 2.

Hypothesis 3, predicting interaction effects between procedural justice and distributive or interactional justice on emotional reactions, was not supported — procedural justice manipulations in both experiments failed to reduce negative emotions resulting from distributive injustice or interactional justice as predicted. In Experiment 1, analysis revealed a small but significant interaction between distributive and procedural justice on negative emotion — F(1,64) = 4.65, p < .05 — in the opposite direction of that predicted; for those in the low distributive justice conditions, fair procedures appeared to aggravate, rather than reduce, negative emotion. However, planned orthogonal contrasts indicated that the difference in means between those in the low distributive justice conditions was not significant — T(64) = .50 (n.s.). In Experiment 2, high levels of procedural justice also failed to attenuate the negative emotions created by interactional injustice — F(1,76) = .15 (n.s.).

Tests of interactions concerning behavioral intentions provided mixed results. Hypothesis 4a, which predicted that subjects in both the low distributive justice/high procedural justice conditions (Exp. 1) and low interactional justice/high procedural justice conditions (Exp. 2) would report greater intentions to behave in a constructive manner, was only partially supported. In Experiment 1, subjects reported significantly greater intentions to improve interpersonal skills in the high procedural justice condition than in the low procedural justice condition — F(1,64) = 7.49, p < .01. However, mean differences in reported intentions to improve work skills in general, while in the hypothesized direction, were not significantly different — F(1,64) = .86 (n.s.). In Experiment 2, intentions to respond constructively did not vary significantly between procedural justice conditions either for intentions to com-
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<th>Procedural Justice</th>
<th>Distributive Justice (Experiment 1)</th>
<th>Interational Justice (Experiment 2)</th>
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<tr>
<td></td>
<td>High</td>
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<tr>
<td>High</td>
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<td>Column ($w^2 = .60$)</td>
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Note: Numbers with asterisks indicate significant main effects, $p < .05$.
Exp. 1: $N = 64$. Exp. 2: $N = 76$.

municate more effectively ($F(1,76) = 1.105$ (n.s.)) or for intentions to increase efforts to keep decision makers informed ($F(1,76) = 3.28$ (n.s.)).

Hypothesis 4b, which predicted that subjects would have a greater tendency to respond to a distributive or interactional injustice in a negative fashion when procedures were unfair, was not supported. The effects of procedural justice on intentions to quit and to reduce work effort were not significant in either experiment — for turnover intentions in Experiment 1, ($F(1,64) = 2.26$ (n.s.)) and in Experiment 2 ($F(1,76) = .37$ (n.s.)); for intentions to reduce work effort in Experiment 1 ($F(1,64) = .11$ (n.s.)) and in Experiment 2 ($F(1,76) = .02$ (n.s.)). Importantly, effects of both distributive and interactional justice were significant for turnover intentions in Experiment 1 (distributive justice) ($F(1,64) = 102.35$, $p < .001$) and Experiment 2 (interactional justice) ($F(1,76) = 35.89$, $p <
.001), and for intentions to reduce work effort in Experiment 1 (distributive justice) \( F(1,64) = 27.12, p < .001 \) and in Experiment 2 (interactional justice) \( F(1,76) = 7.30, p < .001 \). Mean behavioral intention scores are indicated in Table 2.

**DISCUSSION**

The primary purpose of this study was to investigate whether interactional justice can generate effects characteristic of responses to distributive justice. As hypothesized, both distributive justice and interactional justice produced significant main effects on negative emotion, as well as intent to leave the organization and reduce work effort. In fact, interactional injustice produced even stronger negative reactions than those created by distributive injustice. Moreover, as hypothesized, these effects did not emerge for procedural justice.

Contrary to predictions but consistent with an emerging body of findings, fair procedures did not attenuate the substantial negative emotion generated by either distributive or interactional injustice. As suggested by Brockner and Wiesenfeld (1996), examination of conditions under which the outcome \( \times \) process interaction is reversed or non-existent may advance our understanding of the relationship between distributive and procedural justice. Results of the present study suggest that both the sequence of manipulations and the operationalization of outcome variables may have created conditions under which predicted interactions failed to occur.

In both experiments variations of outcomes (either economic or interpersonal) were introduced before variations in procedures. In a recent set of experiments, van den Bos, Vermunt and Wilke (1997) found significant order \( \times \) outcome favorability and order \( \times \) procedural justice interactions, such that the factor that was presented first had a greater impact on attitudes and behavioral intentions than the factor presented second. These authors suggest that information made available first, either concerning procedures or outcomes, serves as the heuristic for judging subsequent information and consequently weighs more heavily in peoples’ justice evaluations.

Second, variations in the outcome variable in both experiments were variations in equity rather than outcome favorability. In Brockner and Weisenfeld’s (1996) summary of 45 studies of outcome \( \times \) process interactions, only 12 were described as using outcome measures that appeared to measure equity. Importantly, variations in outcome favorability provide very little, if any, information about the equity of a particular allocation. Consequently, subjects must rely almost entirely on their perceptions of procedural justice in order to assess overall fairness. For example, Greenberg used an induction procedure that involved having subjects perform a novel task for which they had “... no preconceived standards of productivity” (1987: 56). Moreover, variations in favorability, rather than fairness, may not constitute “fair” comparative effects tests because distributive and procedural justice may not have been operationalized with equivalent strength (Cooper and Richardson, 1986).

Effects of procedural justice should be far less substantial when a clear standard for judging distributive justice is presented. In this study variations in both distributive and inter-
# Table 2
**Mean Behavioral Intention Scores by Condition**

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<th>Distributive Justice (Experiment 1)</th>
<th>Interactional Justice (Experiment 2)</th>
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Note: Numbers with asterisk indicate significant main effects, $p < .05$.  
Exp. 1: $N = 64$. Exp. 2: $N = 76$.  

The Distributive Side of Interactional Justice
actional justice were based on clear and unambiguous information concerning the value of the focal person's and referent's (co-worker's) inputs to the exchange. Hence, the referent standard in both experiments was relatively informative and stable, such that violations of equity may have been less susceptible to subsequent procedural variations than reactions to outcome favorability. Given that both procedural and distributive justice variables exhibited roughly equal variance and produced appropriate and significant main effects on manipulation-check variables, it is plausible that non-significant effects of procedures in this study were due primarily to substantive differences in effects of each variable on emotion, as well as differences in operationalizations of variables between this study and previous studies. The present results strongly suggest that variations in outcomes in terms of equity versus valence are an important matter for further research.

Further, the studies reported in Brockner and Wiesenfeld's (1996) analysis used various operationalizations of procedural justice (i.e., the presence or absence of choice of task and the presence or absence of explanations for outcomes). Importantly, as revealed in results of Colquitt and colleagues' (2001) meta-analysis, Leventhal's criteria (as used in this study) had a stronger relationship to perceptions of procedural justice than process control (or choice) measures. Of the twelve studies that found predicted outcome × procedure interactions that employed outcome measures consistent with equity criteria, only four operationalized procedural justice according to a general measure of perceptions of procedural justice or Leventhal's criteria (one of which resulted in a contrary interaction as found in this study). Of these four, two used negative emotion, or behaviors or intentions indicative of negative emotion, as a dependent variable and found the predicted interaction.

Notably, differences in operationalizations of variables in extant research prevent cross-study inferences and result in contradictory conclusions. For example, in the two studies previously reviewed, that measured the effects of distributive, procedural and interactive justice, one found a substitute relationship between procedural and interactional justice (Skarlicki and Folger, 1997), while the other found no effects for procedures and a compensatory effect between distributive and interactional justice (Brockner et al., 1997). Differences in operationalization of procedural justice between the two studies may partially account for disparate results — in the first study procedural justice was assessed using Leventhal's (1980) rules while in the second study, procedural fairness was assessed in terms of timeliness (how many times the customer had to return to the store to resolve problems). These discrepancies, as well as those between the results of this study and extant findings, suggest that future research must address, head on, discrepancies in conceptualization and operationalization of justice variables. This study attempted to address fundamental issues of construct validity and causality that tend to have been brushed aside in the frenzy of research activity concerning organizational justice.

It is important to note however, that the failure to detect significant effects for procedural justice may be
partially due to a lack of statistical power. For Experiment 1, the power of the F-test to detect main effects of procedural justice on negative emotion, using a conservative Type 1 error of .05, was approximately .30; for Experiment 2, the power was .20 (Glass and Hopkins, 1984). Low power can be primarily attributed to the small effect size of procedural justice on emotion; as predicted, results showed that the effect size for procedural justice on negative emotion ($w^2 = .006$) was far smaller than the effect size for distributive justice ($w^2 = .60$).

Several potential weaknesses of this study should be acknowledged. The disadvantages of experimental designs in terms of external validity have been well noted (cf. Cook et al., 1990). Because the aim of this study was to determine the existence of hypothesized effects and to establish the cause of those effects, an experimental method was deemed most appropriate (Lind and Tyler, 1988). A scenario design was selected because it provides sufficient experimental control over internal validity (Barling and Phillips, 1993), while avoiding exposure of subjects to actual unjust experiences. Moreover, a scenario design allows for the presentation of manipulations within a more complex and realistic context than afforded by most laboratory studies, thus enhancing the potential generalizability of findings. However, by using a scenario-based design, methodological reasons for differences in results between this study and previous experimental studies cannot be ruled out.

Another issue concerns the use of student subjects. According to Lind and Tyler, "...the key to valid scenario studies is to design the study to deal with situations the respondents have experienced and understand" (1988: 47). While experiences of injustice are not unique to any particular segment of the general population, it is possible that undergraduate students may not have had sufficient work experience to be able to fully imagine the implications of injustice, particularly procedural injustice, in the work setting.

Finally, the utilization of two separate experiments to examine the effects of distributive and procedural justice, and interactional and procedural justice, limited the ability to make direct comparisons across experiments. On the other hand, this design allowed us to avoid potential confounding of effects of distributive justice and interactional justice and thus establish a more clear cause-effect relationship between interactional justice and emotional arousal. Importantly, the effects of distributive justice, as modeled by the two-component model, were successfully extrapolated to interactional justice across experiments in which variables were embedded in two distinct experimental (scenario) settings.

Further, the design used in this study leaves important questions unanswered, particularly with respect to interactional effects among distributive, procedural and interactional justice. The nature of such interactions can only be answered by designs that simultaneously assess the effects of all three aspects of organizational justice while avoiding potential confounding of highly correlated justice variables. At the conceptual level, the assertion that interactional and distributive justice are interchangeable, or substitutes for one another, is untenable in light of evidence showing that each variable is distinct and has differential, as well as similar, effects. It seems
far more reasonable to assume that the relationship is compensatory—at times, social outcomes will be relevant and of marginal utility to the individual while at others, economic needs will be more important. While substitution may be evident within discrete justice episodes, as for example, when an individual’s social needs or motives are paramount, we would expect that, within a long-term exchange relationship, the strength of social and economic motives will vary in saliency over time such that the relationship between interactional and distributive outcomes would be generalized and compensatory. At this point, the relationships between interactional and distributive, as well as procedural, justice cannot be unequivocally determined.

CONCLUSION

Results of the present study suggest that, at times, symbolic or intrinsic outcomes engendered by interpersonal treatment in the workplace are part of the content domain of distributable resources that are capable of generating the same emotional and behavioral reactions as outcomes of an economic or tangible nature. Our findings indicate that the interpersonal aspect of interactional justice and distributive injustice exhibited similar effects on negative emotional arousal, as well as intent to reduce work effort and to quit the job, and that similar effects failed to occur as a result of procedural injustice. These results suggest that the underlying affective and cognitive mechanisms involved in judgments of the fairness of social outcomes are the same as, or similar to, judgments concerning the fairness of economic outcomes.

As a practical matter it is important that the assumption that employee/employer relationships are primarily economic in nature be de-bunked. Good management, that promotes cooperative and constructive behaviors over withdrawal and retaliatory ones, requires that managers recognize that the quality of interpersonal treatment in social exchange with employees, or interactional justice, matters. While the relationship between outcomes of each type of exchange remains unspecified, common sense, as well as empirical results, would indicate that both economic and social outcomes of exchange must be perceived as sufficient and fair to promote attitudes and behaviors that contribute to organizational functioning.

References


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