DISTRIBUTIVE AND PROCEDURAL JUSTICE AS PREDICTORS OF SATISFACTION WITH PERSONAL AND ORGANIZATIONAL OUTCOMES

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Distributive justice was found to be a more important predictor of two personal outcomes, pay satisfaction and job satisfaction, than procedural justice, whereas the reverse was true for two organizational outcomes—organizational commitment and subordinate's evaluation of supervisor. However, procedural and distributive justice also interacted in predicting organizational outcomes. We discuss limitations of this study and directions for future research.

Folger and Konovsky captured the key distinction regarding justice in work organizations, noting that “distributive justice refers to the perceived fairness of the amounts of compensation employees receive; procedural justice refers to the perceived fairness of the means used to determine those amounts” (1989: 115). However, few studies have examined how both distributive and procedural justice affect outcomes (e.g., Folger & Konovsky, 1989; Greenberg, 1987a; Konovsky, Folger, & Cropanzano, 1987). In addition, most research has focused on legal rather than work-related issues. For example, Greenberg and Folger (1983) showed that defendants viewed trial verdicts (distributions) positively if they were seen as the result of fair procedures, an effect called the “fair process effect” (cf. Musante, Gilbert, & Thibaut, 1983). Folger and Konovsky pointed out that this research has suggested different predictive roles for procedural and distributive justice. In particular, studies have found distributive justice to predict satisfaction with specific, personal outcomes, like case verdicts, better than procedural justice. The reverse is true, however, when people make more general evaluations of, for instance, legal institutions or their representatives (Lind & Tyler, 1988).

In fact, the few studies that have been done in organizational settings have tended to support the notion that the predictive roles of procedural and distributive justice depend, at least in part, on the nature of the outcome in question. For example, Alexander and Ruderman (1987) found procedural justice accounted for more variance in management evaluations, job satis-
faction, and perceived conflict than distributive justice. Konovsky and colleagues (1987) found that procedural justice predicted organizational commitment, but not pay satisfaction, whereas the reverse was true for distributive justice. Similarly, Folger and Konovsky (1989) found that procedural justice accounted for more variance in organizational commitment and trust in a supervisor than distributive justice, whereas the reverse was true for satisfaction with a pay raise.

Overall, these results suggest that procedural justice may be a more important predictor than distributive justice of outcomes related to evaluating a company as an institution and its representatives, such as organizational commitment and trust in supervisor. In contrast, distributive justice may be a more important predictor of personal outcomes, like satisfaction with pay level, than procedural justice.

Interestingly, these results reflect what we might call a main effect approach to examining the predictive roles of distributive and procedural justice in field research. There are few studies of the interactive effects of the two types of justice. In fact, the existing research evidence about interactive effects comes from laboratory studies. For example, in a recent investigation by Greenberg (1987a), subjects worked on a task in which distributive justice (pay levels) and procedural justice (how pay levels were determined) were manipulated. He found an interaction of the following form; subjects saw high pay levels as fair regardless of procedures but saw low pay levels as fair only when fair procedures were used. Perceptions of unfair treatment were maximized when pay was low and procedures were unfair. Similarly, in a laboratory study, Cropanzano and Folger (1989) found that resentment was highest when subjects perceived that unfair procedures prevented them from receiving high rewards for task performance.

Both Greenberg (1987a) and Cropanzano and Folger (1989) pointed out, however, that research was needed to determine whether these laboratory interactions generalize to organizational settings. An attempt at such generalization was the focus of our research. Another key research question was whether existing theory allows for a precise prediction regarding the form such interactions may take. We used referent cognitions theory (Folger, 1986) to derive just such a prediction.

Briefly, according to referent cognitions theory, individuals evaluate their work experiences by reflecting on “what might have been” under different circumstances and conditions (Folger, 1986). One way employees might accomplish such a comparison would be to cognitively simulate how their current work situation might be different had their organization used fairer procedures. In fact, Cropanzano and Folger (1989) suggested that referent cognitions theory offers a potential conceptual framework for the interactive effects of distributive and procedural justice.

They argued that the theory predicts that resentment should be maximized in organizations when outcomes are poor—distributive justice is low—and the procedures used by a decision maker, like a supervisor, are unfair. In effect, referent cognitions theory suggests that employees will
contrast this situation to the more positive outcomes that they would have obtained had the decision maker used fair allocation procedures. On the other hand, referent cognitions theory predicts that when people perceive procedures to be fair, resentment will be minimal, even when distributive justice is low. Under such conditions, it would be more difficult for employees to envision alternative fairer procedures that could have led to better outcomes.

To test this interaction pattern in a field setting, we surveyed a group of bank employees. In addition to measuring procedural and distributive justice, we assessed perceptions of two important personal outcomes, pay and job satisfaction, and two organizational outcomes: organizational commitment and subordinate’s evaluation of supervisor. If Cropanzano and Folger’s (1989) application of referent cognitions theory is correct, we would expect that the evaluation of these outcomes would be most negative when both distributive and procedural justice are low. But we would expect positive evaluations when procedural justice is high, regardless of the level of distributive justice.

A more speculative prediction is that the interaction pattern referent cognitions theory suggests will be clearest when the focus is on organizational, as opposed to personal, outcomes. Because the former focus on the sources of the procedures that affect employees, such as supervisors and the employing organization as an institution, they provide a clearer target for retaliation than outcomes of a more personal nature. In other words, allowing employees to evaluate an organization as an institution gives them the opportunity to blame the parties responsible for creating the rules of the game—the unfair procedures—that have resulted in a lack of distributive justice. Referent cognitions theory suggests that employees’ resentment is not only a function of low distributive justice, but also of the opportunity to blame “misfortune” on the actions of others rather than on their own behavior (Cropanzano & Folger, 1989).

Finally, should the interactions we predicted fail to materialize, we determined that our focus would shift to the interpretation of main effects. In view of prior research (e.g., Alexander & Ruderman, 1987), we predicted that distributive and procedural justice would each produce strong main effects for a variety of outcomes. Given Folger and Konovsky’s (1989) and Konovsky and colleagues’ (1987) results, however, we expected procedural justice to produce a stronger main effect in predicting organizational outcomes than distributive justice. We expected the reverse to be true with personal outcomes.

**METHODS**

**Respondents**

Surveys were distributed to 1,100 employees of a midwestern bank and completed on company time. Completed surveys were returned anonymously in sealed envelopes. In total, 675 employees completed the survey.
resulting in a response rate of 61 percent. The respondents’ mean age was 33.8 years (s.d. = 12.1); their mean company tenure was 6.3 years (s.d. = 5.8); and 74 percent were women. These respondent demographics compared favorably with company statistics for the work force as whole, suggesting that problems resulting from response bias were unlikely to be a major threat. In the total work force, 68 percent of the employees were women, with an average age of 34.6 years and an average company tenure of 6.9 years.

Measures

Predictors were measures of global distributive and procedural justice. Criterion variables were two measures reflecting evaluations of the surveyed organization and its representatives and two measures of satisfaction with personal outcomes.

**Distributive justice.** We used five of the six items from Price and Mueller’s (1986) Distributive Justice Index. These items ask workers to indicate the extent to which they have been fairly rewarded in view of their responsibilities, experience, job stress, effort, and performance. Rewards in the index are defined broadly, with money, praise, and recognition all being listed as examples. An example of the item format is as follows: “How fair has [company name] been in rewarding you when you consider the amount of effort that you put into your work?” (1 = very unfair, 5 = very fair).

**Procedural justice.** We constructed a four-item procedural justice scale that used the same basic format and five-point response scale as the Distributive Justice Index. Respondents indicated the extent to which the general procedures used to communicate performance feedback, determine pay increases, and evaluate performance and promotability were fair.

**Organizational outcomes.** Organizational commitment was assessed using four items from Cook and Wall’s (1980) commitment scale. These items ask workers to express their agreement or disagreement with various statements (e.g., “I feel myself to be a part of this company”), using five-point scales (1 = strongly disagree, 5 = strongly agree). The second organizational outcome, subordinate’s evaluation of supervisor, was assessed with a single item: “Overall, I think my boss is a poor performer” (1 = strongly agree, 5 = strongly disagree). Several national probability studies (e.g, Quinn & Staines, 1979) have previously used an essentially equivalent item.

**Personal outcomes.** We used three items to assess pay level satisfaction. Two of the items used five-point agree-disagree formats; these were: “The pay for my job is excellent” and “I am satisfied with my current pay.” The third item asked respondents “how they felt” about their pay (7 = delighted, 1 = terrible; cf. Andrews & Withey, 1976). Since they had different measurement scales, we standardized these three items before combining them.

We assessed the second personal outcome, job satisfaction, using the five-item scale developed for the Quality of Employment Surveys (Quinn & Staines, 1979). The items ask about general reactions to a job, such as, “All in all, how satisfied would you say you are with your job?”
RESULTS

Descriptive Statistics

Table 1 presents means, correlations, and reliability coefficients, where applicable, for all study variables. The reliabilities for multi-item scales were generally very good, with alphas ranging from .75 to .92. One concern that might be raised, however, is the correlation between procedural and distributive justice (.67). To help allay this concern, we would make three points. First, prior research has successfully shown that these scales predict different dependent measures, suggesting that they are independent constructs. Second, prominent researchers have claimed that although they are separate constructs, in practice a sizable correlation should be found between them (e.g., Folger, 1987). For example, Folger cited an important study by Tyler (1984) in which the correlation between distributive and procedural justice was .77. Third, we conducted an empirical analysis that sheds some additional light on this issue.\(^1\)

Regression Analysis Results

Separate three-step, hierarchical regression analyses were performed for each outcome variable. At step 1, we entered five control variables: salary, job type, age, gender, and tenure. Statins, Pottick, and Fudge (1986) cautioned that these types of variables need to be controlled for, given their general potential to inflate or suppress relations between other variables. Salary and job type were of special concern, given their potential to affect the particular outcome variables used in this study.

As Table 2 shows, age significantly predicted pay level satisfaction, job satisfaction, and organizational commitment. Consistent with earlier research findings (Weaver, 1980), our finding was that older workers tended to have higher commitment and satisfaction than younger workers. Job type also significantly predicted job satisfaction, evaluation of supervisor, and organizational commitment, with managers being more positive than clerical employees.

At step 2, distributive and procedural justice were entered. Both types of justice were significant predictors of each outcome variable. Consistent with Folger and Konovsky's (1989) contentions, however, distributive justice

\(^1\) Podsakoff and Organ (1986) reviewed techniques that address method variance, including a procedure called the single factor approach. The logic of this approach is that if method variance accounts for the relations between two or more variables, a factor analysis should yield a single global (method) factor. Since researchers have generally viewed this approach as weak but as possibly providing some useful information, we combined it with a stronger confirmatory factor analysis, using LISREL VI (Jöreskog & Sörbom, 1985), which tests models that increase in complexity. The least complex model examined, the single factor model, did not fit the data as well as more complex models; the six-factor model with independent variables for procedural and distributive justice and our four dependent variables fit the data significantly better than all other models tested (Bentler-Bonett index = .927 [Bentler & Bonett, 1980]; Tucker-Lewis index = .933 [Tucker & Lewis, 1973]).
<table>
<thead>
<tr>
<th>Variables</th>
<th>Means</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<td>1. Job type</td>
<td>1.18</td>
<td>0.39</td>
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<td></td>
<td></td>
<td>.42</td>
<td></td>
<td></td>
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<td>2. Salary</td>
<td>15,334.00</td>
<td>11,201.00</td>
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<td></td>
<td></td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>3. Gender</td>
<td>1.75</td>
<td>0.43</td>
<td>-.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Age</td>
<td>33.55</td>
<td>11.35</td>
<td>.01</td>
<td>.02</td>
<td></td>
<td>.21</td>
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<td></td>
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<td>5. Job tenure</td>
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<td>6.10</td>
<td>.07</td>
<td>.10</td>
<td>.00</td>
<td>.51</td>
<td></td>
<td></td>
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<tr>
<td>6. Pay level satisfaction</td>
<td>0.00</td>
<td>2.82</td>
<td>.09</td>
<td>.05</td>
<td>-.08</td>
<td>.18</td>
<td>.11</td>
<td>(.85)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7. Job satisfaction</td>
<td>16.37</td>
<td>5.59</td>
<td>.17</td>
<td>.14</td>
<td>-.09</td>
<td>.29</td>
<td>.15</td>
<td>.42</td>
<td>(.84)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>8. Subordinate's evaluation of supervisor</td>
<td>3.57</td>
<td>1.18</td>
<td>-.15</td>
<td>.11</td>
<td>-.09</td>
<td>.05</td>
<td>.03</td>
<td>.17</td>
<td>.38</td>
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<td>9. Organizational commitment</td>
<td>13.86</td>
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<td>.14</td>
<td>-.12</td>
<td>.22</td>
<td>.11</td>
<td>.46</td>
<td>.59</td>
<td>.32</td>
<td>(.75)</td>
<td></td>
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<td>10. Procedural justice</td>
<td>11.88</td>
<td>3.06</td>
<td>.14</td>
<td>.06</td>
<td>-.11</td>
<td>.12</td>
<td>.01</td>
<td>.51</td>
<td>.43</td>
<td>.34</td>
<td>.53</td>
<td>(.82)</td>
<td></td>
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<td>11. Distributive justice</td>
<td>14.90</td>
<td>4.41</td>
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<td>-.08</td>
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<td>.05</td>
<td>.83</td>
<td>.47</td>
<td>.30</td>
<td>.49</td>
<td>.67</td>
<td>(.92)</td>
</tr>
</tbody>
</table>

*a Correlations greater than .06 are significant at p < .05. Reliability coefficients for multi-item scales are on the main diagonal.

*b For job type, 1 = clerical and 2 = managerial. For gender, 1 = man and 2 = woman.


TABLE 2
Results of Hierarchical Regression Analyses

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Personal Outcomes</th>
<th>Organizational Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pay Level Satisfaction</td>
<td>Job Satisfaction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure</td>
<td>.02</td>
<td>-.03</td>
</tr>
<tr>
<td>Gender</td>
<td>-.02</td>
<td>.02</td>
</tr>
<tr>
<td>Age</td>
<td>.16***</td>
<td>.31***</td>
</tr>
<tr>
<td>Salary</td>
<td>.00</td>
<td>.07</td>
</tr>
<tr>
<td>Job type</td>
<td>.08</td>
<td>.15***</td>
</tr>
<tr>
<td>ΔR²</td>
<td>.04***</td>
<td>.12***</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedural justice</td>
<td>.14***</td>
<td>.18***</td>
</tr>
<tr>
<td>Distributive justice</td>
<td>.52***</td>
<td>.30***</td>
</tr>
<tr>
<td>ΔR²</td>
<td>.37***</td>
<td>.18***</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ΔR² for interaction</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>of procedural and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>distributive justice</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>56.29***</td>
<td>32.68***</td>
</tr>
<tr>
<td>df</td>
<td>8,630</td>
<td>8,604</td>
</tr>
</tbody>
</table>

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

* tended to be a more important predictor of personal outcomes (pay and job satisfaction) than procedural justice. In addition, procedural justice was a more important predictor of both organizational outcomes than distributive justice (see Table 2). In step 3, we entered the interaction of distributive and procedural justice. As Table 2 shows, the interaction terms for both evaluation of supervisor and organizational commitment were significant. When plotted (cf. Cohen & Cohen, 1983), both outcomes yielded the same interaction pattern.

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2 Following a reviewer's suggestion, we conducted our regression analyses again, entering distributive and procedural justice on separate steps to more closely examine their relative predictive power. The results of these analyses were consistent with those given in Table 2; procedural justice was a stronger predictor of organizational outcomes than distributive justice, with the reverse being true for personal outcomes. Specifically, with procedural justice controlled, distributive justice accounted for an additional 5 percent of the variance in job satisfaction and 14 percent of the variance in pay level satisfaction; when the order of entry was reversed, procedural justice only accounted for an additional 1 and 2 percent for the two personal outcomes. With distributive justice controlled, procedural justice accounted for an additional 3 percent of the variance in supervisor evaluation and 6 percent of the variance in organizational commitment. When the order of entry was reversed, distributive justice only accounted for an additional 1 and 3 percent.
To illustrate this pattern, we present the interaction for organizational commitment in Figure 1, which shows that although employees who felt that procedures were fair tended to have higher levels of organizational commitment than those who felt procedures were unfair, this gap was much larger when distributive justice was low. Specifically, when procedural justice was low, organizational commitment varied considerably as a function of distributive justice. When procedural justice was high, however, organizational commitment varied little as a function of distributive justice. Again, an identical interaction pattern emerged for evaluation of supervisor.  

**DISCUSSION**

**Distributive and Procedural Justice as Predictors**

Our finding that both distributive and procedural justice are important predictors of work outcomes underscores recent admonitions for organiza-
tional researchers to examine both types of justice (Greenberg, 1987a,b). We also found, as expected, that distributive justice tended to be a stronger predictor of personal outcomes than procedural justice, whereas the reverse was true for organizational outcomes. The fairness of a firm’s procedures may have a greater impact on organizational commitment than the fairness of personal outcomes that workers receive, perhaps because procedures define the organization’s capacity to treat employees fairly. Thus, if they see procedures as fair, employees may view the organization positively, even if they are currently dissatisfied with such personal outcomes as a low pay raise. In contrast, a pay cut may cripple an employee financially, and a larger paycheck will buy more, regardless of whether procedures were fair or not (cf. Folger & Konovsky, 1989; Konovsky et al., 1987). Our findings are congruent with research in the legal arena that suggests that distributive and procedural justice have different predictive roles depending on whether the outcome in question is personal or reflects more general evaluations of legal institutions or their representatives (Lind & Tyler, 1988).

However, we also found that distributive and procedural justice had significant interactive effects on our organizational outcomes, subordinate’s evaluation of supervisor and organizational commitment. Consistent with Cropanzano and Folger’s (1989) application of referent cognitions theory, these interactions revealed that the combination of unfair procedures and low distributive justice produced the lowest ratings. In contrast, fair procedures produced high commitment and supervisor evaluations, regardless of the level of distributive justice. Advocates of referent cognitions theory argued that, under conditions of procedural fairness, employees will find it difficult to envision that more positive alternative outcomes could have occurred.

Referent cognitions theory may also help explain why we found interaction effects for organizational, but not personal, outcomes. According to the theory, employee resentment requires not only low distributive justice, but also the ability to identify other people and the procedures that they use as the source of poor outcomes (Cropanzano & Folger, 1989). Thus, organizational outcomes may represent a clear target for blame, whereas personal outcomes do not. By definition, organizational outcomes make salient the institutional sources of the procedures that affect employees.

Limitations and Directions for Future Research

One of the most basic limitations of the present study is its exclusive reliance on cross-sectional, self-report data. This reliance precludes us from making strong causal statements about our results. The use of a longitudinal design would improve the ability to make causal statements. In addition, our

Marwell (1978). The results yielded virtually the same effects as the original regression equation, including a significant interaction term.
approach raises the issue of common method variance. Although we can at least partially allay concerns about method variance in our particular case (see the Results section), we would also encourage future justice researchers to take steps to avoid method variance problems in field settings, by, for instance, collecting multiple measures.

Concern might also arise about the small magnitude of our interaction effects. Since interaction terms are not independent of main effects in regression analyses, Cohen and Cohen (1983) recommended that researchers test simple main effect models before entertaining more complicated interactive models. This procedure tends to underestimate the amount of variance for which interaction terms truly account. Furthermore, the literature on regression analysis provides several cautions about interpreting the theoretical or practical significance of interaction terms on the basis of the proportions of variance explained (cf. Champoux & Peters, 1987; Pedhazur, 1982; Stone & Hollenbeck, 1984). Apparently, a key issue is not how much variance is explained, but whether the increment is statistically significant, indicating that the relationship in question is being moderated. However, to understand the actual nature of an interaction effect, researchers should plot separate regression equations for different values of the moderator variable and examine the resulting pattern for its theoretical or practical significance (Stone & Hollenbeck, 1984). This is the approach we took in this research. Still, we would suggest that researchers be sensitive to the limitations of moderated regression analysis and follow the recommendations that have been made to minimize them.

Finally, a basic direction for future research is to determine whether personal and organizational outcomes other than those examined here and in previous research will yield similar predictive patterns for distributive and procedural justice. More research is also needed to explain why distributive and procedural justice may differentially affect personal and organizational outcomes. To address this issue may require a better understanding of how personal and organizational outcomes differ. As Cropanzano and Folger (1989) suggested, referent cognitions theory may provide a useful guiding framework for such efforts.

REFERENCES


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