Process and outcome: gender differences in the assessment of justice

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Summary

We studied the importance that women and men place on distributive and procedural justice. The relationship between distributive justice and several organizational outcomes (e.g. commitment, intent to stay) was stronger for men than women. The relationship between procedural justice and those same outcomes, however, was stronger among women than men. The relation of our findings in justice perceptions are related to other research on gender differences in interpersonal styles and perceptions. Future research ideas are discussed. © 1997 by John Wiley & Sons, Ltd.

Introduction

Distributive justice concerns pose some very important problems for organizations. Issues like how pay should be allotted, how benefits and raises should be allocated, and how other valuable organizational rewards are divided are critical for firms. Considerable research has been conducted on these distribution topics (Greenberg and Cohen, 1982) and a good deal can be said about the ‘best’ way organizations can operate in this arena (Mowday, 1987).

Many people, however, feel that distributive justice is only part of the story—concerns about procedural justice can also have important consequences for companies (Lind and Tyler, 1988). Procedural justice refers to the perceived fairness of the means that are used to make decisions (Folgar and Greenberg, 1985; Greenberg and Folger, 1983; Greenberg and Tyler, 1987). In fact, more recent research has highlighted the importance of the process by which outcomes are distributed, above and beyond the fairness of the actual distributions themselves. Procedural justice issues have been studied in areas like occupational selection (Nacoste, 1987), decision-making (Folger and Greenberg, 1985), and performance appraisal (Folger and Greenberg, 1985). In the performance appraisal area, for example, an important determinant of employee satisfaction with the appraisal is the perceived fairness of the procedures that were used.

Interestingly, recent research seems to indicate that these two aspects of justice may both add to the prediction of employee reactions. A recent study by Alexander and Ruderman (1987), for example, found that both procedural and distributive justice significantly predicted employee reactions like job satisfaction, intentions, supervisor evaluations and more. Folger and Konovsky (1989) surveyed a large sample of manufacturing employees using an expansive set of items measuring procedural and distributive justice. These authors found that procedural justice was equally as successful—and sometimes better than—distributive justice at predicting employee reactions.
Gender as a moderator of distributive justice–outcome relations.

As far as we know, however, there is no research that examines whether some people may put more or less weight on distributive and procedural justice when determining if justice has been served. One variable that might importantly affect reliance on distributive or procedural concerns is gender. As it turns out, considerable research has been conducted on gender differences in distributive allocations, most of it in a laboratory context (e.g. Kahn and Gaeddert, 1985; Major, 1987; Major, in press). In general, this research demonstrates that women tend to underreward themselves and act more generously toward their coworkers than do men. Men tend to divide rewards equitably according to inputs, whereas women seem to divide rewards more equally (Major and Adams, 1983). In fact, Major (in press) notes that several studies have found that women pay themselves less than men even when there are no coworkers involved. Finally, Major, McFarlin and Gagnon (1984) reasoned that when outcomes were held constant, women and men would display differential inputs. Consistent with their thesis, Major et al. found that for a fixed amount of pay, women worked longer and did higher quality work than men.

While only a few studies have looked at such distributive issues outside of a laboratory context or in real organizations, they have yielded comparable results (e.g. Brockner and Adsit, 1986). For example, studies have shown that women have lower pay expectations than men at both career-entry and career-peak, even after taking experience and other career-related factors into account (Major and Konar, 1984; McFarlin, Frone, Major and Konar, 1989). Similarly, once on the job, women report that they deserve lower levels of pay than their male counterparts, again even after various personal and job-related factors were eliminated (Desmarais and Curtis, 1991). In fact, when they are paid less than their male counterparts, studies also show that women often do not feel more dissatisfied with their pay nor experience higher levels of relative deprivation (Crosby, 1982; Major, in press).

Major (in press) has developed a model that argues that this relative lack of dissatisfaction is due to women having a low sense of personal entitlement with respect to pay than men. Determinants of this gender difference include the lower value placed on jobs held mainly by women, as well as other ‘structural inequalities’ such as sex discrimination in hiring and promotion. For example, women often earn less than men, even after accounting for many extra-gender variables (Blau, 1984; Gerhart, 1990; Haberfield and Sherhau, 1990). Based on the overall pattern of laboratory research and theorizing, we would expect that perceptions of distributive justice based on inputs (equity concerns) would be more strongly related to satisfaction with rewards for men than for women in real work settings.

Gender as a moderator of procedural justice–outcome relations

An even more interesting possibility—one that has received little attention—is that gender differences also exist in the perceived importance of procedural justice issues. Several authors have elaborated on what are seen as components of fair procedures, independent of one’s gender. Leventhal (1976), for one, has argued that several elements are necessary and importance for procedural justice to occur. For example, he maintains that things like procedures for appeals, the availability of change mechanisms, and procedures for defining the decision process are important contributors to procedural justice. Other researchers have emphasized factors like the
opportunity to provide input and participation in decision-making as sources of procedural justice (Greenberg and Folger, 1983).

These components of procedural justice seem to dovetail with observations about the behaviour of women in allocation situations, game-playing scenarios, group activities, and in general social situations. For example, women are more likely than men to define success and achievement in terms of the achievement process—how they played rather than the outcome of the game (Farmer and Fyans, 1980; Helmreich and Spence, 1978; Veroff, 1977; Veroff, McClelland and Ruhland, 1975). Research also seems to show that groups of women try to avoid the formation of status hierarchies, whereas men have been observed to turn leaderless discussion groups into such hierarchies (Aries, 1977). Women also are more likely to solicit participation from group members (Rosener, 1990), and try to turn zero-sum games into cooperative ones (Kahn and Gaeddert, 1985). These data seem to suggest that women focus more on process-oriented issues whereas men seem to be more outcome-oriented (see also Deaux and Major, 1982). One explanation for these findings is that women may be socialized to be more sensitive to and interested in cultivating relationships with coworkers than are men (Major, in press; Major and Adams, 1983; Major et al., 1984; Rosener, 1990). Another possibility is that women may have to rely on more formal procedures and systems to obtain various organizational outcomes because of a history of discrimination and sex-role stereotyping that has kept them out of key decision-making processes. For example, Denton and Zeytinoglu (1993) found that working women felt that they had less 'say' about important organizational decisions than their male counterparts, even after controlling for several occupational factors.

In addition, women may also lack access to the informal mechanisms that men often possess to get things like pay raises and promotions. For example, women are less likely to have access to powerful mentors and the informal, male-dominated communication networks and processes that drive top management decision-making in many organizations (Powell and Mainiero, 1992). This may force women to rely on formal procedures and mechanisms to get ahead. In fact, there is some evidence to suggest that women do tend to rely more on formal posting/bidding processes to obtain promotions than men (Cannings and Montmarquette, 1991). This theory and data suggests that women should value the concept and effects of procedural justice. Thus, in contrast to our prediction regarding gender and distributive justice, we expect a nearly opposite pattern for procedural justice. Specifically, we predict that perceptions of procedural justice will be more strongly related to women's evaluation of their work situation than it will for men.

In summary, because men seem to be more outcome-oriented, perceptions of distributive justice may be more important contributors to their satisfaction with organizational outcomes than for women. For women, however, issues like participation in decisions (see Folger and Greenberg, 1985), seem to be more important. Since such process elements are indicators of procedural justice (Leventhal, 1980; Folger and Greenberg, 1985), women may show a stronger connection between procedural justice and satisfaction with organizational outcomes. We test these predictions using a large sample of federal government workers.

**Method**

**Subjects**

Our data come from the ‘Attitudes of Federal Employees’ study. The study was originally conducted by the Federal Office of Personnel Management in 1980 and was designed to gather
attitudinal data from Federal employees about a variety of personnel issues. The study used a stratified random sample of all civilian employees of the Federal Government. The surveys were mailed in three stages. Persons not responding to the first mailing received a follow-up request. Likewise, persons not responding to either of the first two requests received a third follow-up survey. This follow-up procedure is highly recommended (Dillman, 1978).

Surveys were mailed to a stratified random sample of 19,500 federal (civilian) employees. Overall, 13,862 surveys were returned. Because listwise deletion was used in our analyses, however, the actual number of respondents included in this study was 12,670. The survey included items on employment data, and attitudes towards work, coworkers, and supervisors. Respondents were also asked to provide some demographic information, including their pay level, race, gender, and tenure in the organization. These items were used as control variables in our analyses. Gender was simply coded a 1 (female) or 2 (male) and race was recoded to signify white (1) or other racial/ethnic group (2). Pay grade was originally collected as the respondents' exact GS rating, but was collapsed into five categories in the data set to prevent any precise identification (in combination with other data set variables) of a respondent. The coding in the data is as follows: 1 = GS 1–4, 2 = GS 5–8, 3 = GS 9–12, 4 = GS 13–15, 5 = GS 16 and above). Finally, tenure was also coded with a five-category variable (1 = less than a year, 2 = 1–3 years, 3 = 4–9 years, 4 = 10–29 years, 5 = 30 or more years). The gender breakdown of the sample was about 65 per cent male and about 34 per cent female, and the sample was largely white (83 per cent; the remaining 17 per cent were nonwhite groups). Additionally, the average respondent has about 10 years' experience in federal employment and was about GS-11 pay grade on average.

Measures

**Predictor variables**

Three main predictors were used in this study. First, gender was used to predict all of our criterion variables. Second, we computed an index of procedural justice. This index included 13 items that asked about the fairness of procedures throughout the organization, including procedures relevant to assessing and communicating performance feedback, solving work-relating problems, and promotion procedures. (All the items are presented in the Appendix 1). Responses to the items were made on 5-point (1 = strongly disagree to 5 = strongly agree) scales. All items were recoded such that higher scores were indicative of greater procedural justice. Third, an 11-item distributive justice scale was also constructed. This index dealt with respondents’ perceptions of the distribution of various rewards, including raises, promotions, performance ratings, and general reward distribution. Responses to these items were made on

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1 The data collection for this project were commissioned and conducted by the Office of Personnel Management, Washington, D.C. The age of the data may raise some questions about its current applicability. Since women have entered the workforce in increasing numbers over the past 25 years, might there be differences in our findings if a replication was attempted today? We do not think so. The workplace remains sex-segregated to a large extent and women's pay still lags behind that of men (Ivancevich, 1995). Women, for instance, have made little progress in that time in terms of advancing into the ranks of upper management (Jacobs, 1992; Solomon, 1990). Despite their increasing numbers, women are largely clustered in the same job categories that they have been in for the last three decades. For instance, today almost 25 per cent of women work in one of three categories: (1) secretarial/clerical, (2) retail sales, or (3) food service (Ivancevich, 1995). A persistent wage gap also remains (see Auster, 1989; Jacobs, 1992; Pfeffer and Davis-Blake, 1987; Roman, 1990). All this suggests that some of the underlying possible reasons for our observed differences may still be in place. Obviously, however, it is an empirical question as to whether the gender differences we observed would hold up; we encourage research on this and related topics.
the same 5-point scale described above, and were also recoded so that higher scores indicated higher perceived distributive justice.

**Criterion variables**

Two items were used to assess intentions to stay. These items were responded to using the same 5-point scale described above: (a) 'During the next year I will probably look for a new job outside this organization', and (b) 'I often think about quitting'. To be consistent with other measures, these items were recoded. Thus, higher scores indicate intention to stay with the organization.

Second, we assessed job satisfaction using the same 5-point scale. Example items include: (a) 'In general, I am satisfied with my job', and (b) 'In general, I like working here'. Third, respondents were asked to evaluate their supervisors, who may be an important source of their procedural or distributive justice perceptions. Sample items include: (a) 'My supervisor deals with subordinates well', (b) 'My supervisor knows the technical parts of his/her job well', and (c) 'My supervisor handles the administrative parts of his/her job well'. The fourth and final criterion variable was a 6-item measure of organizational commitment. Once again, responses were made on the same 5-point disagree-agree scale. Example items include: (a) 'I care little about what happens to this organization as long as I get a paycheck', and (b) 'What happens to this organization is really important to me'. Items were recoded so that high scores were indicative of high organizational commitment.

Both the predictor and criterion measures constructed for this study are very similar to those used in the organizational literature as a whole and the justice literature in particular. But, there is no getting around the fact that they were constructed here. There were good reasons for constructing 'custom' scales. First, there are actually no standardized measures for some of the constructs in this study, like procedural and distributive justice. Second, even if such scales did exist, it is doubtful that they could have been used in this research. The large sample and the study scope put a premium on keeping questionnaire length to a minimum. That is to say, the magnitude of the study necessitated short scales that could be completed relatively rapidly. Thus, all in all, we feel that the benefit offered by such a large sample outweighs the disadvantages of having to use scales that were constructed for this study.

Nonetheless, the fact that our scales have not been used in exact form elsewhere argues for a look at their psychometric qualities. One problem that looms in studies such as ours is the issue of method variance and its potential impact on our measures. Several things about our design mitigate against a method variance interpretation. First, method variance acts to artificially increase relationships among variables. However, our hypotheses predict interaction effects; that is, we predict that under one condition a relationship is stronger than under another. Such a situation is more difficult for a simple method variance argument to explain. Further, our interaction predictions are opposite in sign. Thus, a complex method variance argument would be necessary to explain 'positive' effects in one condition and 'negative' effects in another condition.

Nevertheless, we did try to address the method variance concern empirically. Although we cannot eliminate this explanation outright, we did examine our data for potential evidence of a method variance problem. In particular, we set up and tested a series of hierarchically nested models. The models are considered 'nested' because they involve adding more and more complexity to the predictive model. The logic of this approach is that one should test models that increase in complexity. A significance test can show if the increasing complexity accounts for a sizeable amount of variance. Of course, a nonsignificant test shows that two models are about equal in their ability to account for the data. Using the principle of parsimony, the simpler model
would better represent the data. Accordingly, we set up a series of models that examined the method variance hypothesis versus a series of other models that increase in complexity. Essentially, this approach reasons that if method variance accounts for the relationship between two or more variables, a factor analysis should yield a single global (method) factor. We found that the single factor model ($\chi^2(902) = 83.166$, goodness of fit index = 0.68) did not fit the data as well as a two-factor model (a set of IV's and a set of DV's) [$\chi^2 (901) = 73.474$, GFI = 0.71]. The difference between these two test statistics is also distributed as chi-square—it shows that the two-factor model represented significant improvement in fit. Other models were also examined, but the bottom line is that the most complex model—the six-factor model (with procedural and distributive justice as independent factors, and our four dependent variables as separate dependent factors) fit the data the best [$\chi^2 (887)=43.543$, GFI=0.85] and significantly better than any other model. These analyses do not provide proof positive for the lack of any method variance problems, but they do show support for the separability of our constructs.

A related concern about our measures is the issue of multicollinearity. High correlations among predictor variables, resulting from method variance or other sources, can obviously be a threat to the study conclusions. Since the effect of multicollinearity is to increase the variance of the estimates of our regression coefficients (the main analysis in our Results section to follow), and thereby mask true significant effects with nonsignificant ones, we were interested in examining this issue. Our reading of the literature shows that there are empirical methods for examining multicollinearity. In particular, there is an hypothesis test for multicollinearity in a correlation matrix (Haitovsky, 1969; Rockwell, 1975). These papers present and develop a test of the null hypothesis that the determinant of the correlation matrix is zero—that the matrix is singular/multicollinear. The test statistic on our data [$\chi^2 (15)=5241$, $p<0.001$] shows that our matrix is significantly different from a singular matrix. That is, there is a general lack of multicollinearity in our data.

**Results**

Table 1 presents the intercorrelations among all study variables. Reliabilities for multi-item scales ranged from 0.70 to 0.90. We used hierarchical regression analysis to examine our hypotheses. In each analysis, a set of control variables was entered at step 1, including the respondents' race, gender, tenure in the organization, and pay level. On step 2, procedural and distributive justice was entered. On step 3, product terms representing the gender x distributive justice and gender x procedural justice interactions were entered.

The first dependent variable we analyzed was the measure of intention to stay with the organization. Table 2 summarizes the results of the regression analysis for this and the other dependent variables. On step 1 of this first analysis, we found that several of the control variables significantly predicted intentions to stay. The analysis shows that pay level, tenure, and gender were significant predictors. Not surprisingly, those with higher pay and more years in the organization had relatively high intentions to stay with the organization. Also, men expressed higher intentions to stay than women. On step 2, we found that the main effects of procedural and distributive justice were also significant predictors of intent to stay: employees' intention to stay was associated with higher procedural and distributive justice perceptions.

On step 3 of this equation we entered the two-way interaction terms. The incremental variance due to this third step significantly added to the prediction of stay intentions ($p<0.01$). First, and
Table 1. Correlations among study variables

<table>
<thead>
<tr>
<th>Variable</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>
<th>12</th>
<th>x</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.17</td>
</tr>
<tr>
<td>Tenure</td>
<td>(2)</td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.65</td>
</tr>
<tr>
<td>Pay grade</td>
<td>(3)</td>
<td>0.20</td>
<td>0.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.02</td>
</tr>
<tr>
<td>Gender</td>
<td>(4)</td>
<td>0.16</td>
<td>0.15</td>
<td>0.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.70</td>
</tr>
<tr>
<td>Proc. just.</td>
<td>(5)</td>
<td>0.11</td>
<td>0.20</td>
<td>0.26</td>
<td>0.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>43.76</td>
</tr>
<tr>
<td>Dist. just.</td>
<td>(6)</td>
<td>0.04</td>
<td>0.03</td>
<td>0.12</td>
<td>0.12</td>
<td>0.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33.01</td>
</tr>
<tr>
<td>4 × 5</td>
<td>(7)</td>
<td>0.18</td>
<td>0.21</td>
<td>0.39</td>
<td>0.67</td>
<td>0.67</td>
<td>0.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>76.56</td>
</tr>
<tr>
<td>4 × 6</td>
<td>(8)</td>
<td>0.14</td>
<td>0.14</td>
<td>0.36</td>
<td>0.38</td>
<td>0.52</td>
<td>0.65</td>
<td>0.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57.44</td>
</tr>
<tr>
<td>Stay int.</td>
<td>(9)</td>
<td>0.05</td>
<td>0.13</td>
<td>0.06</td>
<td>0.43</td>
<td>0.33</td>
<td>0.33</td>
<td>0.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.12</td>
</tr>
<tr>
<td>Job satis.</td>
<td>(10)</td>
<td>0.06</td>
<td>0.12</td>
<td>0.07</td>
<td>0.49</td>
<td>0.43</td>
<td>0.35</td>
<td>0.35</td>
<td>0.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19.72</td>
</tr>
<tr>
<td>Sup. eval.</td>
<td>(11)</td>
<td>0.02</td>
<td>0.01</td>
<td>0.00</td>
<td>0.59</td>
<td>0.61</td>
<td>0.33</td>
<td>0.38</td>
<td>0.40</td>
<td>0.40</td>
<td></td>
<td></td>
<td></td>
<td>24.63</td>
</tr>
<tr>
<td>Commitment</td>
<td>(12)</td>
<td>0.07</td>
<td>0.14</td>
<td>0.17</td>
<td>0.08</td>
<td>0.51</td>
<td>0.41</td>
<td>0.39</td>
<td>0.52</td>
<td>0.69</td>
<td>0.44</td>
<td></td>
<td></td>
<td>23.57</td>
</tr>
</tbody>
</table>

Gender (1 = female, 2 = male) and race (1 = white, 2 = non-white), were dummy coded. For all other variables, increasing scores indicate increasing levels of the variable. Reliabilities for multi-item scales are in parentheses on the main diagonal.

Table 2. Results of hierarchical regression analyses

<table>
<thead>
<tr>
<th>Betas for dependent variables</th>
<th>Intention to stay</th>
<th>Job satisfaction</th>
<th>Evaluation of supervisor</th>
<th>Organizational commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>0.00</td>
<td>! 0.01</td>
<td>! 0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Pay grade</td>
<td>0.04*</td>
<td>! 0.11†</td>
<td>0.00</td>
<td>0.13†</td>
</tr>
<tr>
<td>Tenure</td>
<td>0.12†</td>
<td>! 0.10†</td>
<td>0.01</td>
<td>0.10†</td>
</tr>
<tr>
<td>Gender</td>
<td>0.03†</td>
<td>0.01</td>
<td>! 0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>R-squared increment</td>
<td>0.02</td>
<td>0.02</td>
<td>0.00</td>
<td>0.04</td>
</tr>
<tr>
<td>F for increment</td>
<td>71.12†</td>
<td>88.02†</td>
<td>0.70</td>
<td>124.00†</td>
</tr>
<tr>
<td>R-squared total</td>
<td>0.02</td>
<td>0.02</td>
<td>0.00</td>
<td>0.04†</td>
</tr>
<tr>
<td>F for total</td>
<td>71.12†</td>
<td>88.02†</td>
<td>0.70</td>
<td>124.00†</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedural justice</td>
<td>0.36†</td>
<td>0.40†</td>
<td>0.34†</td>
<td>0.50†</td>
</tr>
<tr>
<td>Distributive justice</td>
<td>0.18†</td>
<td>0.18†</td>
<td>0.37†</td>
<td>0.14†</td>
</tr>
<tr>
<td>R-squared increment</td>
<td>0.24</td>
<td>0.27</td>
<td>0.42</td>
<td>0.35</td>
</tr>
<tr>
<td>F for increment</td>
<td>2073.91†</td>
<td>2512.17†</td>
<td>4680.21†</td>
<td>3600.03†</td>
</tr>
<tr>
<td>R-squared total</td>
<td>0.26</td>
<td>0.29</td>
<td>0.42</td>
<td>0.39</td>
</tr>
<tr>
<td>F for total</td>
<td>754.15†</td>
<td>919.35†</td>
<td>1560.88†</td>
<td>1329.81†</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proc. just. × gender</td>
<td>! 0.22*</td>
<td>! 0.12§</td>
<td>0.09</td>
<td>! 0.14†</td>
</tr>
<tr>
<td>Dist. just. × gender</td>
<td>0.21†</td>
<td>0.18†</td>
<td>! 0.02</td>
<td>0.22†</td>
</tr>
<tr>
<td>R-squared increment</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>0.01</td>
</tr>
<tr>
<td>F for increment</td>
<td>5.34*</td>
<td>3.85†</td>
<td>2.10</td>
<td>6.90†</td>
</tr>
<tr>
<td>R-squared total</td>
<td>0.26</td>
<td>0.30</td>
<td>0.43</td>
<td>0.39</td>
</tr>
<tr>
<td>F for total</td>
<td>566.90†</td>
<td>690.40†</td>
<td>1171.90†</td>
<td>999.17†</td>
</tr>
</tbody>
</table>

*p < 0.01; †p < 0.001; ‡p < 0.05; §p < 0.10.

consistent with our predictions, a significant procedural justice × gender interaction was found (beta = −0.22, p < 0.001). This interaction is plotted in Figure 1. To construct the plot, we followed procedures suggested by Cohen and Cohen (1983) and Stone and Hollenbeck (1984).
This entails computing separate regression equations for males and females. Lines were constructed for men and women using values ranging from $-1$ S.D. below the mean to $+1$ S.D. above the mean on the independent variable. Figure 1 shows that procedural justice makes more of a difference for women in affecting stay intentions than it does for men. Women who perceived a high level of procedural justice appear to have the highest stay intentions, whereas the slope for men does not vary as much. Procedural justice would thus appear to have less of an impact on men's stay intentions than it does for women.

Second, as we predicted, the reverse seems to be true for the distributive justice x gender interaction (beta = +0.21, $p<0.001$). The slope of the line predicting stay intentions from distributive justice appears to be steeper for men than for women (see Figure 2). Men who perceive relatively high levels of distributive justice, for example, also have the highest level of stay intentions among these groups. The difference in perceived distributive justice among women did not affect their stay intentions as strongly as it did for men (see Figure 2).

We next analyzed the measure of job satisfaction (see Table 2 for summary). On step 1 we again found that several of the control variables significantly predicted job satisfaction. As

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2 There may be some concerns about the size of the interaction effects. Several authors have cautioned against using the amount of variance explained to alone evaluate the practical or theoretical significance of interaction effects (see Champoux and Peters, 1987; Pedhazur, 1982; Stone and Hollenbeck, 1984). These authors maintain that the important point is not how much variance is explained, but whether that variance represents a statistically significant increment. Accordingly, researchers should calculate regression equations for different values of the moderator variable. These equations can then be plotted and the pattern evaluated for its theoretical significance (Stone and Hollenbeck, 1984). We followed this approach in the present study.
before, both pay levels and tenure significantly predicted job satisfaction. Step 2 showed that the main effects of procedural and distributive justice are also significant predictors: as levels of both these variables increase, so does job satisfaction. Step 3 yielded a significant increase in the variance for the two-way interaction effects. First, the procedural justice x gender interaction for job satisfaction, although not significant, showed a borderline ($p<0.07$) trend in which procedural justice appeared to have a greater impact on women’s job satisfaction than on men’s. The reverse effect was found for the distributive justice x gender interaction, which was significant ($\beta = +0.18, \ p<0.01$). The relationship between distributive justice and job satisfaction was stronger among men than among women. This pattern of interaction effects for gender and the two types of justice mirrors that of the intention to stay measure. Thus, Figures 1 and 2 are also good depictions of our interaction effects for job satisfaction.

Next, we analyzed the supervisor evaluation measure. For this measure, step 1 revealed no significant effects due to the control variables (see Table 2). Step 2 showed that the main effects of both procedural and distributive justice were significant predictors of supervisor evaluations. Higher perceptions of procedural and distributive justice are associated with more positive evaluations of supervisors. On step 3, however, we found no support for our gender x justice predictions.

Finally, we analyzed the effect of our independent variables on organizational commitment. As shown in Table 2, we once again found that pay level and tenure were significant predictors: as pay and tenure in the organization increase, so does the commitment of these respondents. On step 2 we found significant main effects due to both procedural and distributive justice, with greater justice being associated with higher commitment. As predicted, we also found significant
gender x justice interactions for this dependent variable on step 3. First, a significant gender x procedural justice effect was obtained (beta = -0.14, p < 0.05), showing the slope of the regression line for women was steeper than the line for men. Thus, procedural justice was a more important predictor of commitment for women than for men. We found the opposite pattern for the distributive justice x gender interaction: distributive justice was a stronger predictor of commitment for men than women (beta = 0.22, p < 0.001). This is the same pattern of effects depicted in Figures 1 and 2 for the intention to stay and job satisfaction measures.

Discussion

Across several dependent variables we found that women and men weight procedural and distributive justice differently. The relationships between procedural justice and various organizational outcome variables were generally stronger for women than men. Interestingly, the opposite occurred for the relation between distributive justice and those outcome variables: the relationship was stronger for men than women. Apparently, procedural justice, whether processes were fair or not, plays a bigger part in how women evaluate their experience in organizations than it does for men. Satisfaction for men, however, seems more closely tied to their perceptions of whether outcomes were fairly distributed.

It is important to note that our data do not mean that women do not get satisfaction from outcomes, or that men only get satisfaction from outcomes. They do appear to mean, however, that there is a significant difference between men and women in their reliance on fair procedures and fair outcomes. This represents a useful advance in the literature. Although research has indicated that women and men place different value on distributive justice (see Major, 1987), we are unaware of any research that has directly made similar comparisons about procedural justice. Most studies relevant to gender differences in perceptions of procedural justice are merely suggestive in that they do not directly examine the link between procedural justice and the evaluation of workplace experiences (cf. Cannings and Montmarquette, 1991).

Limitations and directions for future research

Of course, this study also has limitations. Clearly, our data are cross-sectional and any causal interpretation of the results would not be warranted. Additionally, although we have tried to address the method variance issue, we are by no means certain that it does not play some kind of role in this and other similar studies. As far as we know, no multi-method studies have been conducted in the organizational justice area. We plan such a study and encourage others to do the same. Finally, the effect sizes for our various dependent variables are not large or terribly impressive. This could be due to the very large sample and sample frame of the research. The explicit purpose of the study was to gauge opinion in a variety of different government agencies, from the Justice Department to the Army to the Department of Education. Clearly, there are

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3 In our regression analyses, we also found significant effects due to the procedural x distributive interaction in step 3. These effects did not significantly diminish the other two-way interaction effect. Since we were not hypothesizing these effects, we did not include a discussion of them in our introduction nor our results. Nevertheless, as a reviewer noted, future researchers may need such information. Accordingly, please note that the betas for this interaction term are -0.09, -0.05, -0.39, and -0.24 for (respectively) the stay, satisfaction, supervisor, and commitment variables.
probably major differences between and among these agencies and these may have acted to wash out some of the predictability of our justice variables. Indeed, research within one organization usually does a much better job at accounting for variance than we have done (e.g. Folger and Konovsky, 1989).

Beyond these important issues, much more needs to be done to identify and test factors or conditions that either buffer or exacerbate the moderating role that gender has on justice–outcome relations. For one, it might be useful to examine gender context effects in addition to gender per se. Dalton, Todor and Owen (1987), for example, studied the nature of the gender composition of dyadic relationships on justice outcomes. They argue that in addition to gender, gender composition (e.g. man/man, woman/man, etc.) is also important. For example, consider the effect of procedural justice perceptions in a performance evaluation. Whether the evaluation is conducted by a man or woman supervisor may impact a man or woman employee differently (cf. Dalton et al., 1987). This insight may help explain why we did not find our predicted gender interaction for the supervisor evaluation measure. Evaluating a supervisor invariably refers to a dyadic relationship. And, since we were unable to ascertain the gender breakdown of this dyad, this may have acted to wash out any gender interaction on this measure.

It may also be important to consider the complex nature of gender itself (beyond composition effects) in further studies (Deaux, 1985). That is, many authors have observed that gender is not a unitary concept itself—it is sometimes a mix of what is usually considered more typical male or female behaviors. It would be useful, therefore, to examine the impact of sex-role orientation (masculine, feminine, androgynous) on preferences for procedural and distributive justice. Additionally, assuming that these gender differences can be replicated among different workers and companies, it would also be valuable to clearly pin down why such differences exist. One reason may be that these differences reflect a functional response to outcome discrepancies, such as pay level. Recent data, for example, seem to show that women earn less than men, even after accounting for many extra-gender variables (Blau, 1984; Gerhart, 1990; Haberfield and Sherhau, 1990). Thus, perhaps women are concentrating on procedural issues because this is a viable avenue for redressing pay discrepancies and other outcome differences. In the long run, the instalment of fair procedures might reduce outcome discrepancies among groups. Likewise, if men are unfairly benefiting, or if they maintain the power over distributive decisions, then they can preserve such outcome differences. This also argues for a focus on procedure by women. The flip side of this functional argument is that men would be more likely to be concerned with distributive issues (and perhaps their relationship with their supervisor), as opposed to fair procedures since the former generally favors them.

This explanation suggests that instrumental reasons—to achieve or maintain better salary/outcomes—is the explanation of women’s greater reliance on fair procedures. Another, not necessarily incompatible explanation, is the learned satisfaction perspective. This approach, based on a sex-role socialization model, argues that men have been socialized to achieve satisfaction from outcomes—often obtained from competition. Women are often socialized to glean satisfaction from the process of interacting (cf. O’Leary, Krulewitz and Lamm, 1980). Thus, this perspective claims that women’s reliance on procedural propriety is not necessarily instrumental, but instead is a source of satisfaction in and of itself. Indeed, some data show that, relative to men, women value process issues more, actively seek cooperation over zero-sum situations, and solicit input from group members (Kahn et al., 1980; Major, 1987). Veroff’s (1977) distinction between the enjoyment felt from outcomes and process for men and women also supports this speculation.

Interestingly, Lind and Tyler’s (1988) recent group value model of procedural justice is also relevant here. This model claims that people value group membership, and the treatment
received from groups is used to gauge their value to the group. This in turn has an impact on self-esteem and a variety of other personal outcomes. One strong indicant of treatment by groups is the presence of a set of procedures that can (theoretically) ensure fair treatment of the group member (Tyler, 1989). One implication of our findings is that this group value model might hold better for women than for men. If women value procedural propriety more than men, perhaps because they more strongly value group membership, then the model should better predict the behavior of women than men. Of course, this is entirely speculative, but worthy of future research.

Practical implications

The criterion variables we used (e.g. organizational commitment) have been repeatedly shown to have important ‘bottom-line’ implications for organizations. For example, organizational commitment has been linked to turnover and absenteeism rates (Mowday, Porter and Steers, 1982). Clearly, the criterion variables studied here are often of great concern to management. In fact, we feel that our results have several practical implications. At the most basic level, our results clearly indicate that both procedural and distributive fairness positively impact the evaluation of workplace experiences. These results dovetail with other research on this topic (e.g. Folger and Konovsky, 1989; McFarlin and Sweeney, 1992; Sweeney and McFarlin, 1993). This collection of results suggests that managers would be well-served by trying to improve procedures and distributions or at least to create an ‘aura’ of fairness. These suggestions are also underscored by Greenberg’s (1990) contention that to maintain if not enhance employees’ motivation and commitment, managers must at least ‘look fair’ from their subordinates’ perspective. Our results are consistent with this general admonition.

In addition, our results suggest that managers need to be aware that there may be gender differences among their employees regarding the relative weights assigned to distributions and procedures. This may imply different strategies for dealing with men and women as management tries to create an overall environment of fairness. For example, in trying to establish an improved system of procedures (e.g. for performance evaluations or the distribution of bonuses), managers often have to ‘sell’ changes to employees. When dealing with their male subordinates, managers may want to emphasize the notion that distribution levels will eventually improve. This does not mean that managers should not mention or stress the benefits of improved procedures per se when dealing with male subordinates, but rather that these procedures are also a mechanism for substantially improving their outcomes. On the other hand, managers may want to stress all the ways in which a new system will improve the fairness of procedures per se when discussing changes with female subordinates. Again, this is not to say that improvement of distributions over time is unimportant or will have no impact on women. What we are saying is that managers may need to emphasize how changes will increase procedural fairness to ensure the cooperation of their female employees.

In reality, these suggestions may amount to nothing more than differences in emphasis when managers discuss changes with male and female employees. Clearly, it is to managers’ advantage to ensure that both procedures and distributions are seen as fair. To achieve this goal, however, it may also be important to present this message in a way that is sensitive to the values of the target audience.

The suggestions made so far amount to strategies for altering a persuasive communication about a decision already taken by management. However, management may also be well-served to opt for more substantive steps. For example, managers may want to involve their employees in
the design of any new procedures so that not only will fairness be maximized, but that employees will be more likely to see and better understand that a fairer system has been put into place. Such a design process, if open enough, might allow both genders to focus on the justice issues that are of special concern to them.

Finally, we want to caution that these are tentative recommendations that are constrained by the limitations of our study. There may be a host of other individual, organizational, and occupational factors that also affect employee concerns with either distributive or procedural justice. It remains for future research to uncover these factors and specify the steps that management should take to deal with them.

References


### Appendix 1

**Procedural justice items (13 items)**

1. I am not sure what determines how I can get a promotion in this organization (recoded).
2. I am told promptly when there is a change in policy, rules, or regulations that affects me.
3. It’s really not possible to change things around here (recoded).
4. There are adequate procedures to get my performance rating reconsidered if necessary.
5. I understand the performance appraisal system being used in this organization.
6. When changes are made in this organization, the employees usually lose out in the end (recoded).
7. Affirmative action policies have helped advance employment opportunities in this organization.
8. In general, disciplinary actions taken in this organization are fair and justified.
9. I am not afraid to ‘blow the whistle’ on things I find wrong with my organization.
10. If I were subject to an involuntary personnel action, I believe my agency would adequately inform me of my grievance and appeal rights.
11. I am aware of the specific steps I must take to have a personnel action taken against me reconsidered.
12. The procedures used to evaluate my performance have been fair and objective.
13. In the past, I have been aware of what standards have been used to evaluate my performance.

**Distributive justice items (11 items)**

1. Promotions or unscheduled pay increases here usually depend on how well a person performs on his/her job.
2. Under the present system, financial rewards are seldom related to employee performance (recoded).
3. There is a tendency for supervisors here to give the same performance ratings regardless of how well people perform their jobs (recoded).
4. Under the present system, supervisors here get few tangible rewards for excellent performance (recoded).
5. Performance appraisals do influence personnel actions taken in this organization.
6. My supervisor evaluated my performance on things not related to my job (recoded).
7. I will be demoted or removed from my position if I perform my job poorly.
9. I will be promoted or given a better job if I perform especially well.
10. My own hard work will lead to recognition as a good performer.
11. I will get a cash award or unscheduled pay increase if I perform especially well.