

Reactions to Procedural Injustice in Payment Distributions: Do the Means Justify the Ends?

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In a laboratory study, 192 undergraduate students performed a task for which they received either high, medium, or low monetary outcomes as a result of a fair or unfair procedure. Subjects reported that medium and high outcomes were fair regardless of the procedure used, but that low outcomes were only fair when they were based on a fair procedure. The outcomes received, however, had no impact on ratings of the fairness of the procedures used. These results corroborated earlier findings from the dispute-resolution literature, but extend them to reward-distribution contexts in which different manipulations of procedural justice were used. The limitations of equity theory in accounting for improprieties in organizational procedures is discussed.

It is well established that distributions of organizational rewards (such as pay raises, promotions, job status, and the like) influence, in some manner, the attitudes and behavior of employees (Lawler, 1977). Indeed, several theoretical conceptualizations of justice in organizations, most notably equity theory (Adams, 1965; Walster, Walster, & Berscheid, 1978), have focused extensively on how distributions of organizational rewards (also referred to as *outcomes*) affect job satisfaction and performance (for a review, see Greenberg, 1982). This legacy of theory and research, although it reveals a great deal about reactions to the nature and level of organizational rewards, provides little insight into possible effects caused by the manner in which these rewards are established. As a result, questions remain about whether or not (and if so, how) the way organizational rewards are determined influences reactions to them.

A reorientation in emphasis from *what* the rewards are to *how* they are determined follows from theoretical conceptualizations of *procedural justice* (e.g., Thibaut & Walker, 1975), offering a broader, more procedurally oriented conceptualization of justice than the traditionally outcome-oriented, *distributive justice* perspective of equity theory (see Thibaut & Walker, 1978). Whereas distributive justice focuses on the fairness of a distribution of resources, procedural justice focuses on the fairness of the procedures used to make those distributive decisions. Recent research on procedural justice has highlighted the importance of resource distribution procedures as determinants of fairness in organizations (for reviews, see Folger & Greenberg, 1985; Greenberg, 1986a; Greenberg & Folger, 1983). Alexander and Ruderman (in press), for example, surveying more than 2,800 federal employees, found that employees' concerns about how their salaries were determined accounted for more variance in job satisfaction than the level of

those salaries. Similarly, with respect to another organizational outcome, performance evaluations, Landy, Barnes-Farrell, and Cleveland (1980) found that the process by which workers' performance appraisals were determined was related to the perceived fairness of their evaluations, regardless of how positive or negative they were. More generally, in a survey of executives, Sheppard and Lewicki (in press) found that procedural factors (the way outcomes were determined) were reported as being more critical than specific outcome variables themselves as determinants of fair and unfair treatment in their organizations. Taken together, such evidence highlights the importance of procedural aspects of justice in the context of organizational reward distributions.

What makes a reward distribution procedure unfair? In his theory of procedural fairness, Leventhal (1976, 1980; Leventhal, Karuza, & Fry, 1980) posited that fair allocation procedures are characterized by resource distributions that are consistent across persons and over time, free from bias, based on accurate information, correctable, representative of all recipients' concerns, and based on prevailing moral and ethical standards. Recent survey studies have shown that workers report extreme dissatisfaction with resource distribution procedures that violate these standards, and believe them to be unfair. For example, in their survey study, Sheppard and Lewicki (in press) found that accounts of unfair incidents frequently alluded to elements in Leventhal's conceptualization (such as inconsistency and bias in reward allocations). Similarly, Greenberg (in press) found that workers reported that performance evaluations made without keeping accurate performance records were unfair. Finally, Barrett-Howard and Tyler (1986) have shown that role-playing subjects responded negatively to violations of Leventhal's procedural justice standards in imagined work settings. Together, this body of work suggests that criteria for stipulating procedurally fair and unfair practices exist that recently have begun to receive empirical validation.

With increasing awareness of the importance of procedural justice in organizations and preliminary demonstrations of adverse reactions to procedural justice violations comes the need to know how reactions to outcome distributions and the proce-

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dures from which they are derived are related. The primary question of interest is how the fairness of the procedures used influences the perceived fairness of the resulting outcomes. Do fair procedures lead to fair outcomes? There is good reason to hypothesize that there would be a main effect of procedures on judgments of distributive fairness such that fair procedures lead to judgments of fairer outcomes than unfair procedures. Conceptual support for this hypothesis may be derived from several sources. For one, Leventhal (1976) claimed that unfair procedures cannot yield fair outcome distributions. Similarly, Thibaut and Walker (1975) suggested that there may be a perceptual overlap between distributive justice and procedural justice such that the fairer the procedure used to determine outcomes, the more those outcomes are likely to be evaluated as being distributively just. Indirect empirical support for the hypothesis can be found in studies simulating legal dispute resolution techniques in which the perceived fairness of the resulting verdicts were influenced by the procedures on which they were based; procedures promoting personal participation in adjudication were seen as fairest (Lind, Kurtz, Musante, Walker, & Thibaut, 1980; Walker, Lind, & Thibaut, 1979). Although these studies involve contexts and operational definition of procedural injustice that are quite different from the present study (and therefore only modest empirical justification for the hypothesis), they provide good insight into the question of interest.

A second major issue addressed in the present study is the opposite question—namely, how do the outcomes received influence the perceived fairness of the procedures by which they were determined? It already has been established that higher outcomes are seen as being fairer than lower outcomes—the so-called *egocentric bias* in perceptions of distributive justice (e.g., Greenberg, 1983a). We may ask whether this effect generalizes to perceptions of procedural justice as well? The results of previous studies reveal a mixed answer to this question. Although several investigations have reported that beneficiaries of positive outcomes tend to view the procedures leading to them as being fair (e.g., LaTour, 1978; Tyler & Caine, 1981, Studies 2 and 4), others have reported that outcome favorability does not influence perceptions of procedural justice (e.g., Lind et al., 1980). The evidence bearing on this question, is not only contradictory but is based on retrospective questionnaires or uninvolved role-playing techniques, which weakens our confidence in its generalizability. Accordingly, the present study manipulated outcome level and measured its immediate impact on perceptions of procedural fairness. Corroboration of the egocentric bias would require finding a significant main effect of outcome level in ratings of outcome fairness such that higher outcomes are seen as fairer than lower outcomes. To the extent that this effect generalizes to perceptions of procedural fairness, a similar main effect of outcome level on procedural fairness ratings would be expected.

Finally, the present study provided an opportunity to explore the possibility that reactions to procedural injustices would be moderated by their underlying causal basis—either individual or organizational. This variable is suggested by research showing that reactions to distributive justice differ as a function of whether the inequity is caused by an individual or an organization (Greenberg, 1986c; Leventhal, Younts, & Lund, 1972). The following question was asked: Would individually based or orga-

nizationally based unfair procedures elicit greater reactions? A specific prediction is not immediately forthcoming due to recent evidence suggesting potentially opposite reactions. On one hand, Folger and Martin (in press) have shown that subjects are likely to react more strongly against agents of injustice who are expected to be able to continue their unjust actions in the future. On the other hand, evidence also suggests that victims of injustice may refrain from striking back at causal agents when they believe their actions will have little impact (Martin, Brickman, & Murray, 1984). Combining these two findings makes it difficult to predict how individuals will respond when they believe the procedures they confront are based on organizational policies, which may be expected to be more enduring and serious sources of injustice, but may also be more difficult to correct. The present study explored the possibility that attitudinal and behavioral reactions to procedural justice and injustice would be differentially influenced by the individual or organizational basis of their origin, although no specific hypotheses were tested.

Method

Subjects and Design

The participants were 192 undergraduate students (96 men and 96 women) at a midwestern university who volunteered to participate in a study allegedly concerned about "consumer use of sales catalogues." In exchange for taking part in the study, subjects were promised a payment of "up to \$8" for the 1-hr session. (This phrasing of the stated payment amount was revealed in pilot testing to result in a potential range of payments perceived to be fair compensation for participating in the study.) Five additional subjects (3 men and 2 women), evenly distributed over the experimental conditions, also participated in the study, but their responses were not analyzed due to their failure to follow experimental instructions.

The overall design of the experiment was a $3 \times 2 \times 2 \times 2$ factorial in which the independent variables were outcome level (high, medium, or low), procedural fairness (fair or unfair), origin of procedure (individual or organizational), and sex of subject. There were an equal number of men and women randomly assigned to each cell.

Procedure

Pairs of same-sex subjects participated in each experimental session. They were told that they would be performing a "catalogue searching task," and then would complete a brief questionnaire assessing their reactions to the task.

Experimental task. The purpose of the experimental task was to provide an apparent basis for the experimentally manipulated payments that followed. So as to avoid arousing subjects' suspicions about the experimental manipulations, a task was used that has been shown in previous research to be one for which subjects have no preconceived standards of productivity (Greenberg, 1983b). The task consisted of locating specified items in a department store catalogue and copying their prices onto index cards on which the items were identified. The rationale was given that this study was being conducted to find out how the design of catalogues influences people's ability to use them. After the experimenter demonstrated the task and answered subjects' questions about how to perform it, the subjects were escorted to opposite ends of the same room and were seated at desks containing the index cards, pencils, and catalogue needed to perform the task. Because subjects were seated facing opposite directions, they could not see each other's work.

After performing this task for 45 min, the experimenter entered the work room and instructed subjects to stop working. He then handed each subject a large manila envelope into which he instructed them to place all of their index cards, both the completed and incomplete ones. (This practice minimized subjects' opportunities to assess their relative inputs.) The experimenter announced that he would get the subjects started on the questionnaire and arrange for their payment, but that first they would have to leave the workroom so that another group of subjects could be brought in. Subjects were then asked to go to any one of three nearby rooms, labeled "Room A," "Room B," and "Room C", to complete the study. The experimenter explained that because these rooms were small and contained only one desk, only one subject should enter a room, and wait there for the experimenter to return. This procedure made it possible for the experimenter to independently manipulate the experimental conditions in each session.

Independent variable manipulations. Between 3 and 6 min later the experimenter returned to each subject's experimental room and announced how their pay was determined. This information constituted the procedural fairness manipulation. In the *fair-procedure* condition subjects were told that their pay was based on how well they performed on the catalogue-searching task relative to the other person. Better workers were said to receive a higher proportion of the \$8 than poorer workers. In the *unfair-procedure* condition subjects were told that their pay was determined by the room that they selected. Each of the three rooms, it was explained, had a predetermined amount of money associated with it that constituted the payment of the person selecting it.¹ This manipulation of procedural injustice—a seemingly arbitrary procedure for determining pay—is justified by its inclusion of several procedural elements specified by Leventhal (1980), most notably that the procedure violates usual payment allocation practices and that it fails to base allocations on accurate performance information.

Following this, the experimenter commented on the origin of the allocation procedure he just explained. In the *individual* condition, the experimenter said that it was he who personally decided how the payment division decision was to be made. In the *organizational* condition, the experimenter explained that the decision to divide the pay this way was made by the large company that sponsored the research.

Based on the announced procedure, the experimenter explained, he would now pay subjects their share of the \$8. In particular, outcome level was manipulated by telling subjects that they would be receiving either \$7 (in the high-outcome condition), \$4 (in the medium-outcome condition), or \$1 (in the low-outcome condition). To enhance the salience of this manipulation, the experimenter took out eight \$1 bills and handed the appropriate number to the subject.

Dependent measures. After subjects took the money, the experimenter handed them a booklet containing six questionnaire items. Using 9-point bipolar scales, subjects were asked to indicate the following: their perception of the fairness of the payment they received, the fairness of the procedure used to determine their payment (for both items, 1 = *extremely unfair*, 9 = *extremely fair*), their concern over the pay they received, their concern over how their pay was determined (for both items, 1 = *extremely unconcerned*, 9 = *extremely concerned*), their liking for the experimental task, and their liking for the experimenter (for both items, 1 = *extremely dislike*, 9 = *extremely like*). The four questions assessing concern and liking were considered supplementary measures designed to provide insight into the reasons underlying responses to the two fairness questions.

Subjects were assured of the anonymity of their responses. In support of this claim subjects were given a letter-size envelope into which they were to insert their completed questionnaires. These envelopes, it was explained, were to be inserted into a large folder tacked onto a bulletin board on the wall before leaving the room. The folder was labeled "Catalogue Study—Completed Questionnaires" and contained some al-

ready-stuffed envelopes, thereby supporting the illusion of response anonymity.

On the bulletin board immediately to the left of the folder for depositing the completed questionnaires was a prominent notice on which there was printed an octagonal-shaped sign containing the words "STOP UNFAIR EXPERIMENTS." The remainder of the text read as follows, "Treated Unfairly in an Experiment? Call the Ethical Responsibility Board to Report any Unfair Treatment in Human Experimentation." At the bottom of the sign appeared the words "Take Our Number," immediately over a series of vertical cuts in the paper approximately 38-mm long. On each strip appeared a local telephone number that subjects could easily take by tearing one strip off the sign. To invite subjects to do so, four strips were already torn off the sign, leaving five phone-number strips for subjects. If one or more additional strips were missing after subjects left the room, that was taken as the subject's behavioral intention to express dissatisfaction with the experiment, providing a behavioral measure of dissatisfaction to supplement the questionnaire responses.

Debriefing. As subjects left their rooms they were intercepted by the experimenter, who conducted the postexperimental debriefing. Subjects were very carefully debriefed and were given the difference between what they were already paid and the maximum stated payment, thereby leaving each subject with a total of \$8. In postexperimental interviews no subjects expressed any suspicions about the actual purpose of the experiment or admitted having prior knowledge about it.

Results

Preliminary Analyses

A $3 \times 2 \times 2 \times 2$ multivariate analysis of variance was performed, using as between-subjects factors the three manipulated variables (outcome level, procedural fairness, and origin of procedure) and as an exploratory variable, sex of subject. The six questionnaire measures constituted the dependent variables. Statistically significant effects were obtained for outcome level, procedural fairness, and the interaction between them (all values of multivariate $F \geq 11.19$, $p < .001$). All other sources of variance were nonsignificant (all values of multivariate $F < 1.00$). Correlations between responses to the six questionnaire items were all nonsignificant; using Fisher's transformation, the mean of the 15 zero-order correlations in the matrix was .04, *ns*. Accordingly, none of the measures were combined prior to data analyses. On the basis of these findings, all analyses of the questionnaire results reported in this article are based on 3×2 (Outcome Level \times Procedural Fairness) univariate analyses of variance.

Perceived Fairness Measures

Analyses of outcome fairness revealed a significant main effect of outcome level, $F(2, 186) = 6.06$, $p < .005$, $\omega^2 = .08$.

¹ A "pre-inquiry quasi control group" (Orne, 1969) of 28 subjects from the same population as that used in the main study was used to assess the validity of this manipulation, without possible contamination created by knowledge of the outcomes. These participants were subjected to the same experimental procedure as the regular subjects, but they did not receive information about their outcome level or the origin of the procedure. The subjects (one half of the group) who received the fair-procedure manipulation ($M = 7.81$) reported that it was significantly fairer than did the other half who received the unfair-procedure manipulation ($M = 1.89$), $F(1, 26) = 89.76$, $p < .001$.

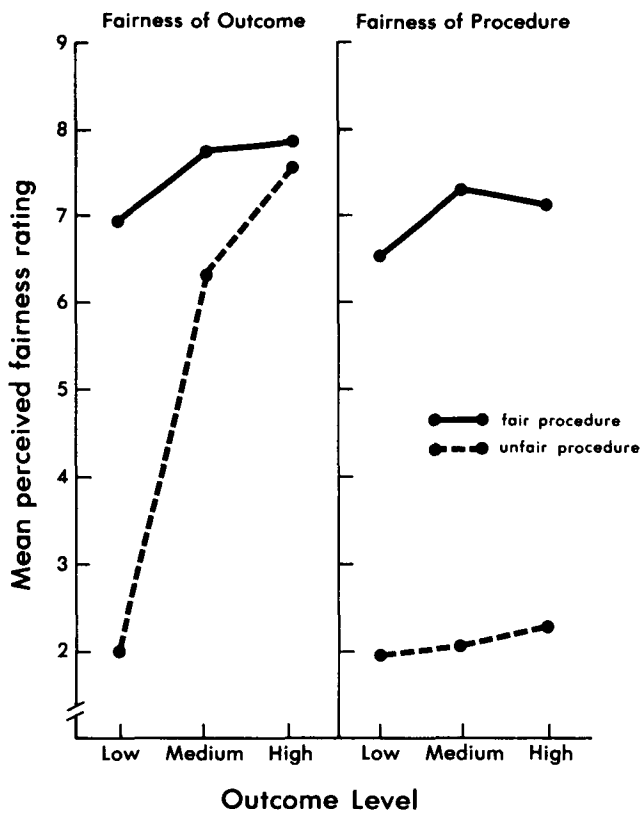


Figure 1. Mean ratings of outcome fairness and procedural fairness as a function of outcome level and procedure.

Newman-Keuls tests ($\alpha = .05$) revealed that this effect resulted from the tendency for subjects to report that low outcomes ($M = 4.45$) were less fair than medium outcomes ($M = 7.08$) or high outcomes ($M = 7.70$), which were not significantly different from each other. Also significant was the main effect of procedural fairness, $F(1, 186) = 12.18, p < .001, \omega^2 = .17$, such that fair procedures ($M = 7.55$) were believed to result in fairer outcomes than unfair procedures ($M = 5.27$). Both these effects, however, were qualified by a significant interaction between outcome level and procedural fairness, $F(2, 186) = 19.47, p < .001, \omega^2 = .27$. The means corresponding to this interaction are displayed in the left-hand panel of Figure 1.

Simple main effects tests across procedures revealed that a significant difference in the perceived fairness of outcomes occurred only at the low-outcome level, $F(1, 62) = 9.75, p < .001$, where fair procedures were seen as responsible for fairer outcomes than unfair procedures. This is in contrast to medium- and high-outcome levels, in which the procedures used were found to have no significant influence on the fairness of the resulting outcome; in both cases, $F < 2.00, ns$.

For ratings of the fairness of the procedures used, the only significant source of variance was the main effect of procedural fairness, $F(1, 186) = 20.69, p < .001, \omega^2 = .12$. As shown on the right side of Figure 1, the fair procedure was seen as being fairer than the unfair procedure. Unlike ratings of outcome fairness, this effect was not qualified by outcome level; for the interaction, $F < 1.00, ns$.

Concern Over Outcomes and Procedures

Analyses of subjects' ratings of amount of concern over the outcomes they received yielded as the only significant source of variance a main effect of outcome level, $F(2, 186) = 8.74, p < .005, \omega^2 = .19$. Newman-Keuls tests ($\alpha = .05$) revealed that this effect resulted from the tendency for subjects in the low-outcome condition ($M = 7.40$) to express a significantly higher degree of concern over outcomes than either those in the medium-outcome condition ($M = 3.75$) or in the high-outcome condition ($M = 4.15$), which were not significantly different from each other.

Analyses of subjects' concern over the procedures used resulted in a significant main effect of procedural fairness, $F(1, 186) = 4.12, p < .05, \omega^2 = .06$, such that higher concern was expressed under unfair conditions ($M = 5.62$) than fair conditions ($M = 3.10$). The meaning of this effect was qualified, however, by a significant Outcome Level \times Procedural Fairness interaction, $F(2, 186) = 16.73, p < .001, \omega^2 = .26$. Simple main effects tests were used to compare responses across procedures at each level of outcome. It was found that when outcome levels were low, subjects expressed significantly more concern over unfair procedures ($M = 8.05$) than fair procedures ($M = 2.80$), $F(1, 62) = 88.30, p < .001$. However, when outcome levels were either moderate ($M = 3.75$) or high ($M = 3.90$), there were no significant differences found between procedures; in both cases, $F < 1, ns$.

Liking for Task and Experimenter

The only significant source of variance found for ratings of liking for the task was the main effect of outcome, $F(2, 186) = 9.40, p < .001, \omega^2 = .15$. Newman-Keuls tests ($\alpha = .05$) revealed that the means across all three levels of outcome (low $M = 3.75$, medium $M = 5.53$, high $M = 7.28$) were significantly different from each other. The higher the outcome, the more the task was liked.

For ratings of liking for the experimenter, the only significant source of variance was the main effect of procedural fairness, $F(1, 186) = 25.61, p < .001, \omega^2 = .11$. This effect was the result of the tendency for subjects to show greater liking for experimenters who treated them fairly ($M = 6.75$) than those who treated them unfairly ($M = 2.82$).

Behavioral Intention Measure

The final dependent measure was the number of subjects who took the telephone number from the notice posted on the bulletin board—a measure of intention to complain about unfair treatment. It was found that only subjects in the unfair-procedure/low-outcome condition took the telephone number. Specifically 14 out of 32 subjects in this condition (43.75%) took the number, whereas no subjects in any of the other conditions did so.

Of the 14 subjects who took the telephone number, 12 were in the condition in which they were told that the procedure was the result of an organizational policy, whereas only 2 were in the condition in which they were told that the procedure was the result of an individual decision. The difference between the

proportion of subjects in the two cells who took the telephone number (12 out of 16 [75%] vs. 2 out of 16 [12.5%]) was statistically significant ($z = 3.57, p = .0023$).

Discussion

The present research addresses two principal questions—one about the effects of procedures on outcomes, and the complementary question about the effects of outcomes on procedures.

The Influence of Procedures on Outcomes

How do the procedures used affect the reactions to the outcomes received? Extrapolating from studies simulating legal dispute-resolution contexts, (e.g., Lind et al., 1980; Walker et al., 1979) it was hypothesized that fair procedures would lead to outcomes believed to be fairer than would those resulting from unfair procedures. Although this hypothesis was strongly supported, the relative perceived fairness of the rewards based on fair procedures compared to unfair procedures only manifested itself when outcomes were low. In contrast, medium- and high-level outcomes were reported to be equally fair regardless of the fairness of the procedures used to bring them about. Stated differently, the means (procedures used) justified the ends (outcomes received) only when those ends were positive (medium- or high-outcome levels). This pattern of results partially supports but qualifies Leventhal's (1976) claim that "procedural fairness is a necessary precondition for the establishment and maintenance of distributive fairness" (p. 230). The present findings suggest that procedural justice may be a necessary precondition for distributive justice, but only when the outcomes are low.

The way in which outcome level qualified the effects of procedure suggests that procedures may matter most to people when they result in negative outcomes. This possibility is supported by the present finding that expressed concern over procedures was highest when unfair procedures resulted in low payments. Not surprisingly, it was precisely under these conditions that subjects behaviorally expressed their concern over unfair treatment. Subjects took action in response to the procedural impropriety only when their outcomes were low, despite the fact that unfair procedures were seen as being equally unfair across all outcome levels. Why didn't subjects experiencing medium- and high-level outcomes react to the procedural injustice? The fact that they perceived these higher outcomes as being fair appears to have removed subjects' justification for taking action in response to unfair procedures. This interpretation of the results is bolstered by evidence that segments of society benefiting from unfair procedures may express concern over the unfair situation but refrain from doing anything to jeopardize their privileged position (Cohen, 1986).

It is interesting that victims of unfair procedures were more likely to take action directed at redressing the injustice when they believed the unfair procedure followed from an organizational policy than when it was an individual decision. An explanation for this difference is suggested by Folger and Martin's (in press) recent findings suggesting that reactions to procedural infractions are exaggerated when the infraction is especially serious and expected to continue in the future. To the extent that

the organizationally based procedural injustices were seen as being more serious and permanent than the individually based ones, then the present results are not surprising.²

Not surprisingly, subjects' positive reaction to their pay generalized to the task itself; subjects liked tasks better for which they were highly paid than those for which they were poorly paid. The fact that higher outcomes were believed to be fairer than lower outcomes supports previous research (e.g., Greenberg, 1983a) showing that subjects believed to be fair those outcomes that benefited themselves. This result is also consistent with Thibaut and Walker's (1975) finding that it is the loser of trials who are most likely to view the verdicts as being unfair. Despite the corroborative nature of the present evidence, caution is needed in interpreting and generalizing from it because the meaning of apparent improprieties may be challenged in the context of a laboratory experiment. Similarly, limitations imposed by the single-item dependent measures used in this study (e.g., possible ambiguities) also restrict the potential generalizability of the findings.

The Influence of Outcomes on Procedures

A complementary question of interest was how do the outcomes received influence reactions to the procedure used? The results showed that fair procedures were believed to be fairer than unfair procedures regardless of the resulting level of outcome. The egocentric bias found in ratings of outcome fairness (i.e., that higher outcomes are judged fairer than lower outcomes) did not generalize to ratings of procedural fairness. Of particular interest is the finding that even procedures leading to low outcomes were believed to be fair when they resulted from fair procedures. Analogous evidence has been obtained by Tyler (1984; Tyler & Folger, 1980), who found that citizens who were found guilty of a misdemeanor by a judge or who were cited for a traffic violation by a police officer believed they were treated fairly when the authority figure adhered to certain expected practices. Not surprisingly, such authority figures tended to be liked, as was the experimenter in the present study, when they followed a fair procedure.

Although outcome level did not influence judgments of the fairness of the procedure used, it did have other effects. For example, low outcomes aroused concern over outcomes and over the procedures by which they were obtained (especially when they resulted from unfair procedures), and diminished liking

² Indeed, the questionnaire responses of 127 pilot subjects supports the claim that injustices caused by organizational policy are more serious and more permanent than those caused by an individual decision. These subjects read vignettes describing cases in which low outcomes resulted from an individually based or organizationally based procedure calling for outcomes to be based on an arbitrary decision rule—the choice of a room. It was found that ratings of seriousness of the infraction and permanence of the procedure (both on 9-point scales, with higher ratings reflecting greater degrees of seriousness and permanence) were significantly higher in the organizationally based condition (M for seriousness = 6.74, and M for permanence = 7.12) than in the individual-decision condition (M for seriousness = 3.82, and M for permanence = 4.02); values of $F(1, 126) = 12.73$ and 14.16 , respectively, in both cases $p < .001$.

for the task. These findings clearly discount the possibility that outcome level failed to influence procedural fairness judgments because it was not made salient in the study. Instead, although the effects of outcome level were recognized, they did not influence perceptions of the fairness of the procedures used. That is, the organizational ends received (monetary rewards) did not justify the means (procedures) by which they were attained.

A similar tendency for outcome favorability to have no influence on perceptions of procedural justice also has been found in a study by Lind et al. (1980), conducted in a legal dispute-resolution context. Comparisons between the present findings and those of Lind et al. must be made cautiously because of the very different experimental settings and operational definitions of procedural injustice used. Lind et al. operationally defined procedural injustice by limiting litigants' input into the decision-making process (inspired by Thibaut & Walker, 1975), whereas in the present study unfair procedures were created by using a capriciously applied allocation rule (inspired by Leventhal, 1980). Both procedures were believed to be unfair, seemingly because both are counternormative in their respective settings. Yet, it remains an untested possibility that different sources of procedural improprieties would have resulted in different reactions.

Implications

The present study has important implications for research and theory on procedural justice. Primarily, it shows that many of the same reactions to the absence of control over the decision-making process demonstrated in studies of dispute resolution also manifest themselves in response to the capricious reward allocation procedure used in the present experiment. In particular, the present results corroborated Lind et al.'s (1980) findings about the positive effects of outcome level on perceptions of distributive justice and the lack of impact of outcome level on perceptions of procedural justice. In addition, by showing the effects of manipulations of procedural fairness along the lines suggested by Leventhal (1980), the present study supports and extends preliminary investigations (e.g., Sheppard & Lewicki, in press) showing that such procedural concerns are expressed among workers by showing how these factors operate. However, because a compound operationalization of an unfair procedure was used in the present study (violating prevailing standards and failing to use accurate performance information), it is unclear precisely which procedural characteristics accounted for the results. Implications for organizational behavior research also are suggested by the present work. Notable in this regard is the suggestion that theoretical conceptualizations focusing on organizational rewards, such as equity theory (Adams, 1965) and expectancy theory (e.g., Porter & Lawler, 1968), may need to be expanded to incorporate considerations of *how* outcomes are determined as well as *what* they are. By focusing on relative outcome and input levels, equity theory is not equipped to interpret the observed differences in the perceived fairness of low-level rewards derived from fair and unfair procedures. To the extent that procedures qualify the meaning of outcomes (and reactions to them), as demonstrated, then it would be essential for conceptualizations of justice in organizations to incorporate procedural variables. Indeed, given that or-

ganizational procedures are more frequently cited than outcomes as causes of unfairness in organizations (Greenberg, 1986a; Sheppard & Lewicki, in press), and because procedures contribute more to job satisfaction than do outcomes (Alexander & Ruderman, in press), the need to explore organizational procedures is further emphasized.

The results of the present study suggest several potentially fruitful new directions for future research. Among these is the important unaddressed issue of how workers' reactions to procedural injustice influences their job performance. Although equity theory (e.g., Adams, 1965) explains how workers are likely to react to unfair outcomes, it remains unclear how these reactions may be qualified by unfair organizational procedures. In a related vein, it would appear useful for organizational researchers to assess the generalizability of the present findings by examining the effects of a variety of potentially important procedural variables (such as those suggested by Folger & Greenberg, 1985; Sheppard & Lewicki, in press). The restricted procedural improprieties examined in the present study, although responsible for interesting findings, may be of limited usefulness in permitting generalizations to be drawn about the general theoretical properties of procedural justice (Leventhal, 1980). Finally, a further potential limitation of the study rests in the fact that the laboratory methodology used precludes the possibility of directly generalizing from the present findings to field applications. However, as is the case in theoretically based research, the issue of generalizability applies to the phenomenon under investigation rather than to the research findings themselves. As future researchers begin to recognize the importance of distinguishing between the outcomes of managerial decisions and the procedures that led to these decisions in organizational contexts—as is just beginning to be done in the field of performance appraisal (Greenberg, 1986b)—it will become possible to assess the external validity of the concepts uncovered here.

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