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EFFECTS OF PROCEDURAL AND DISTRIBUTIVE JUSTICE ON REACTIONS TO PAY RAISE DECISIONS

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We conducted a survey to examine the impact of distributive and procedural justice on the reactions of 217 employees to decisions about pay raises. Distributive justice accounted for more unique variance in satisfaction with pay than did procedural justice, but procedural justice accounted for more unique variance in two other measures of attitudes about the employing institution and its authorities, trust in supervisor and organizational commitment. We discuss what our results imply about the nature of justice in organizations and the distributive-procedural distinction.

As Greenberg (1987) noted, growing interest in procedural justice has superseded organizational researchers' previous neglect of this issue, placing it alongside distributive justice, or equity (Adams, 1965), as a salient research issue. *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 (cf. Folger, 1977). Because procedural justice has been neglected until recently, there is virtually no organizational research addressing a fundamental question—namely, whether either type of justice is more closely related to some criterion variables than to others.

Research in legal and political contexts has suggested that procedural justice is more closely related to the evaluation of system or institutional characteristics, whereas distributive justice is more highly related to the evaluation of specific outcomes. For example, Tyler and Caine (1981) found that perceived procedural justice accounted for unique variance in evaluations of government leaders and institutions beyond that contributed by distributive justice, whereas the converse was not true. Tyler (forthcoming) reported data in which procedural justice significantly predicted assessments of legitimacy and support for legal authorities, but distributive justice did not.

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Other legal and political studies have shown a similar relationship between procedural justice and support for leaders or institutions, but they have also provided evidence that outcome satisfaction is more strongly related to distributive than to procedural justice. For example, Tyler, Rasinski, and McGraw (1985) found that distributive justice accounted for almost twice as much variance in outcome satisfaction as did measures of procedural fairness. From an analysis based on structural equations modeling, Tyler (1984) reported a significant path coefficient between distributive fairness and outcome satisfaction, whereas the path from procedural fairness to outcome satisfaction was not significant.

After reviewing this research, Lind and Tyler concluded that "procedural justice has especially strong effects on attitudes about institutions or authorities, as opposed to attitudes about the specific outcome in question" (1988: 179). In addition, they offered the following interpretation of the data: "In making leadership or institutional evaluations people are taking a long-term perspective on membership within a group. With personal satisfaction they are reacting to a single decision" (1988: 224). Lind and Tyler's conclusions thus suggest the hypothesis that procedural justice is more highly related to institutional evaluations that require a long-term perspective, like organizational commitment, than it is to satisfaction with the outcome of specific decisions. The latter may result from a short-term perspective and be less stable.

Although evidence for the differential effects of procedural and distributive justice in the legal and political domains is substantial, virtually no evidence bearing on this issue has been gathered in workplaces. One previous study, a survey of over 2,000 federal employees by Alexander and Ruderman (1987), examined the relative contributions of distributive and procedural justice by constructing predictor measures that represented those two forms of justice. Two scales in that study's survey, evaluation of supervisor and trust in management, were criterion measures similar to the leader-institution support measures that have been examined in legal and political settings. The contribution of the procedural predictors was substantially greater than that of the distributive indexes; R^2s for evaluation of supervisor were .21 and .03; and R^2s for trust in management were .11 and .05.

Despite this evidence for the differential effects of procedural and distributive justice, Alexander and Ruderman's study is problematic in terms of both the predictor and the criterion variables used. The criterion variables did not include pay satisfaction, which previous research has suggested might be a key indicator of differential impact by procedural and distributive justice. Because such outcome satisfaction measures typically have not shown the type of result Alexander and Ruderman obtained but rather the reverse pattern (a stronger contribution of distributive justice), their inclusion and the demonstration of contrasting patterns would have helped to rule out plausible alternative explanations, such as that the procedural predictor was better measured.

The predictor shortcoming stemmed from the use of data originally collected by other investigators not interested in distributive and procedural justice and not theoretically informed about the nature of those constructs. For example, one of the predictor variables that Alexander and Ruderman put in the procedural justice set was a two-item measure, labeled performance appraisal fairness, whose first item referred to appraisals as "generally . . . done fairly here." Respondents might have interpreted "done fairly" as meaning that the outcomes, rather than the procedures, were fair. The second item was directly related to distributive rather than procedural justice; it asked respondents whether their last rating "was about what it ought to have been."

In addition to Alexander and Ruderman's research, other studies examining perceptions of performance appraisal systems have also failed to use measures constructed with a clear distinction between distributive and procedural justice in mind. Perceptions concerning appraisal systems are relevant to the more general topic of reactions to allocation decisions, which has been the focus of the justice literature. Unfortunately, the literature on procedural justice has not informed the research on performance appraisals. Landy, Barnes, and Murphy (1978), for example, found that opportunities for employees to express their feelings when evaluated predicted a measure of the perceived fairness and accuracy of a performance evaluation (cf. Dipboye & de Pontbriand, 1981). That research, however, examined only a small number of the potential components and consequences of procedural fairness.

To study procedural justice more explicitly than has past research, we examined the results of Greenberg's (1986) findings. He addressed open-ended questions about perceived fairness to experienced managers, asking them to recall critical incidents about performance appraisals used to make pay and promotion decisions. Greenberg's analysis identified a distributive and a procedural factor. The former consisted of two items that assessed the contingent relationship between performance and a recommended salary raise or promotion. The procedural factor consisted of the following five items describing rater behavior: soliciting input prior to an evaluation and using it, two-way communication during an interview, the ability to challenge or rebut an evaluation, rater familiarity with a ratee's work, and consistent application of standards.

Each of those procedural items represents a category of appraiser behaviors that collectively might be called the components of procedural justice. Greenberg's study not only revealed more components than the earlier research on performance appraisal, but also linked those components to theories about procedural justice (Leventhal, Karuza, & Fry, 1980; Thibaut & Walker, 1978). We considered those theories in constructing a scale of the components of procedural justice containing items relevant to Greenberg's categories. We used another set of predictors to assess distributive justice. Our hypotheses were that procedural justice would be more strongly related

to attitudes about institutions and their authorities than would distributive justice, whereas distributive justice would be more strongly related to pay satisfaction than would procedural justice. Decisions about pay raises seemed an ideal context for testing such hypotheses because raises are an individual outcome that is especially salient to employees. In addition, the procedures associated with pay raise decisions presumably have important institutional implications; these precedures may, for instance, be seen by employees as reflecting institutional values.

Our hypotheses addressed issues beyond the scope of Greenberg's (1986) research, which examined only the antecedents of procedural justice, not its consequences. Our hypotheses about the consequences of distributive and procedural justice were based on Lind and Tyler's (1988) conclusions regarding citizen attitudes in legal and political contexts. Our objective was to see whether findings from the legal and political arenas would generalize to organizational settings.

METHODS

Respondents

First-line employees of a privately owned manufacturing plant in the south central United States were surveyed. All 217 people who received the survey completed it (62% of the company's employees, responding voluntarily). Women constituted 45 percent of the group. The average respondent was 34 years old, had 14 years of education, and had worked at the company for 5 years.

Procedures

Employees took part in the survey during company time. Over a period of one week in September 1986, small groups were called off their jobs each hour to fill out questionnaires at a central location. Respondents were instructed to think about the practices their supervisors had used to determine their most recent salary increase, which had been awarded in April 1986. We also recorded the percentage of increase employees' raises represented from company records.

Although the company had not instituted a uniform, formal system of performance appraisal ratings, supervisors were instructed to use the annual inflation rate (based on the Consumer Price Index) as the standard for the size of the raises awarded to average performers, with raises for superior and inferior performers being adjusted around this standard. The official policy was for supervisors to inform subordinates of the size of their raise in private, individual meetings held annually, but no records existed to verify whether such meetings had occurred or what the content of the meetings had been. It was unknown, for example, whether employees had received explanations of the basis for the decisions.

Predictor Measures

Measures of the components of procedural justice were derived through principal axis factoring (varimax rotation) of the 26 procedural items on the questionnaire. We developed the 26 items by referring to existing literature that has examined different elements of procedural fairness (e.g., Greenberg, 1986; Lind & Tyler, 1988). Table 1 shows the results of the factor analysis of the procedural justice items. Items loading above .40 on a factor were unit-weighted and averaged as a measure of a particular procedural component. Four factors, labeled feedback, planning, recourse, and observation, emerged with content consistent with Greenberg's results. We eliminated a fifth factor with low reliability and a marginal eigenvalue.

Two items measured the perceived fairness of the pay raise decision: "How fair do you consider the size of your raise to be?" and "To what extent did your raise give you the full amount you deserved?" We summed these items to form a distributive justice index. Two additional measures related to distributive justice were also included. One measure assessed the perceived favorability of employees' raises in light of their expectations. Dipboye and de Pontbriand (1981) demonstrated the importance of this variable as a predictor of opinions toward performance appraisal. We patterned a second measure after Greenberg's (1986) distributive factor and assessed the contingency of the relationship between performance and pay, asking "To what extent was the size of your raise related to your performance?" These variations allowed us to assess the predictive power of alternative conceptualizations of distributive justice.

Criterion Measures

The short form of the Organizational Commitment Questionnaire developed by Mowday, Steers, and Porter (1979) and the raise subscale of the Pay Satisfaction Questionnaire developed by Heneman (1985) were included as criterion measures. We assessed employees' trust in their supervisors by the scale developed for that purpose by Roberts and O'Reilly (1974).

Control Measures

Two other variables, the percent of salary increase (raise) and a personality trait measure of negative affectivity (NA), were also included. We measured negative affectivity with a 10-item scale developed by Watson, Clark, and Tellegen (1988). This trait measure reflects an individual's disposition to respond negatively regardless of the situation. Watson, Pennebaker, and Folger stated that negative affectivity may therefore "operate as a substantial nuisance factor in many areas of research" (1987: 141). They cited as an example that "presumed measures of job stress or dissatisfaction can be expected to correlate strongly with NA," and suggested that "it is advisable to measure the NA levels of respondents whenever feasible" (1987: 145–146). Because negative affectivity may contaminate true relationships be-

TABLE 1
Factor Analysis of Procedural Justice Items

Items[a]	Factors[b]				
	Feedback	Planning	Recourse	Observation	Unnamed[c]
1. Was honest and ethical in dealing with you	**.78**	.17	.16	.16	.25
2. Gave you an opportunity to express your side	**.71**	.05	.16	−.01	.03
3. Used consistent standards in evaluating your performance	**.68**	.29	.20	.17	.05
4. Considered your views regarding your performance	**.67**	.27	.23	.10	−.03
5. Gave you feedback that helped you learn how well you were doing	**.64**	.38	.11	.08	.11
6. Was completely candid and frank with you	**.60**	.39	.16	.11	.32
7. Showed a real interest in trying to be fair	**.55**	.40	.18	.20	.32
8. Became thoroughly familiar with your performance	**.52**	.27	.15	.44	−.01
9. Took into account factors beyond your control (R)	**−.50**	−.36	−.17	−.22	−.10
10. Got input from you before a recommendation	**.46**	.16	.21	.08	−.39
11. Made clear what was expected of you	**.45**	.02	.08	.32	.00
12. Discussed plans or objectives to improve your performance	.15	**.75**	.02	.13	−.11
13. Review, with your supervisor, objectives for improvement	.27	**.54**	.36	.07	.16
14. With your supervisor, resolve difficulties about your duties and responsibilities	.18	**.51**	.37	.21	.15
15. Obtained accurate information about your performance	.39	**.48**	.13	.30	.21
16. Found out how well you thought you were doing your job	.40	**.46**	.01	.18	−.19
17. Asked for your ideas on what you could do to improve company performance	.28	**.41**	.03	.02	−.17
18. Find out why you got the size of raise you did	.03	.14	**.76**	.04	.14

TABLE 1 (continued)

Items[a]	Factors[b]				
	Feedback	Planning	Recourse	Observation	Unnamed[c]
19. Make an appeal about the size of a raise	.12	−.03	**.76**	.02	.05
20. Express your feelings to your supervisor about salary decision	.19	.01	**.69**	.01	.02
21. Discuss, with your supervisor, how your performance was evaluated	.29	.21	**.64**	.15	.23
22. Develop, with your supervisor, an action plan for future performance	.35	.39	**.54**	.06	.01
23. Frequently observed your performance	.28	.33	.07	**.89**	−.03
24. Behaved in a way you thought was *not* appropriate (R)	.35	−.03	.08	−.02	**.57**
25. Allowed personal motives or biases to influence recommendation	−.04	.12	.11	.05	**.52**
26. Was influenced by things that should *not* have been considered (R)	.09	−.21	.15	−.04	**.40**
Unrotated eigenvalues	4.5	5.78	1.73	1.27	0.98
Variance explained	17.3	22.2	6.6	4.9	3.8
Cronbach's alpha	.89	.85	.88		

[a] We introduced items 1–12, 15–17, and 23–26 with "Indicate the extent to which your supervisor did each of the following." All other items were introduced with "Indicate how much of an opportunity existed, AFTER THE LAST RAISE DECISION, for you to do each of the following things." "R" indicates reverse scoring.

[b] Boldface indicates the items that were used to define each factor.

[c] This factor was eliminated.

tween predictors and criteria, we included it as a control in examining the relationships between procedural or distributive justice and the criteria.[1]

The percent of salary increase was included because Dipboye and de Pontbriand (1981) demonstrated that the perceived favorability of an appraisal was strongly and positively related to employees' opinions of an appraisal system. We could not control favorability of appraisals per se in this study because most employees did not receive a formal appraisal rating; hence, we used the raises awarded as a proxy. Because employees were aware of the company philosophy that pay was to be based on performance, we presumed that the higher an employee's raise, the higher the likelihood the employee would infer that the evaluation of his or her work had been favorable.

RESULTS

Table 2 shows the means, standard deviations, intercorrelations, and reliabilities for all variables. The multiitem scales' reliabilities were acceptable, exceeding the .70 value recommended by Nunnally (1978).

The top of Table 3 displays the results of the multiple regression analysis that included all the study variables, and the bottom of the table shows the results of testing our hypotheses with a usefulness analysis involving hierarchical multiple regression (Darlington, 1968). A usefulness analysis examines a predictor's contribution to unique variance in a criterion beyond another predictor's contribution.

The full regression analysis shows that feedback, a component of procedural justice, is significantly correlated with organizational commitment and with trust in supervisor. Recourse, another component of procedural justice, is also significantly related to trust in supervisor. The distributive justice index and feedback are significantly related to satisfaction with raises. The perceived favorability of a raise and its contingency on performance, however, were not significant predictors of employee attitudes. The usefulness analysis shows the components of procedural justice to be uniquely associated with all the criterion variables, whereas controlling procedural justice shows distributive justice to be uniquely associated only

[1] Brief, Burke, Atieh, Robinson, and Webster noted that "serious thought needs to be given to . . . how NA might interact with such context factors as an organization's goal setting, performance appraisal, and compensation systems" (1988: 197). In their research, Brief and colleagues examined the extent to which the relationship between self-reported stress as a predictor variable and self-reported strain as a criterion variable might be contaminated by negative affectivity as a nuisance variable. Their results "indicated zero-order stress-strain relationships as commonly reported in the literature, at best, are obscured by NA with the zero-order relationships being inflated considerably" (1988: 194). The effort to control for similar spurious and inflated relationships between predictors and criteria was the basis for our examining negative affectivity's role as a nuisance factor in our data.

TABLE 2
Means, Standard Deviations, Reliabilities, and Correlations[a]

Scales	Means	s.d.	1	2	3	4	5	6	7	8	9	10	11	12
1. Organizational commitment[b]	5.44	1.29	.92											
2. Satisfaction with raise[c]	2.84	0.98	.35***	.86										
3. Trust in supervisor[d]	6.30	2.25	.48***	.45***	.86									
4. Feedback[d,e]	5.62	1.73	.43***	.56***	.58***	.89								
5. Planning[d,e]	5.79	2.03	.39***	.37***	.53***	.67***	.85							
6. Recourse[d,e]	5.60	2.43	.22***	.38***	.40***	.50***	.45***	.88						
7. Observation[d,e]	6.03	2.74	.32***	.26***	.37***	.52***	.58***	.26***						
8. Global distributive justice[d,f]	4.46	2.47	.33***	.64***	.35***	.49***	.35***	.33***	.28***	.86				
9. Outcome expectation[d,f]	3.95	2.38	.23***	.54***	.27***	.36***	.32***	.33***	.26***	.71***				
10. Outcome contingency[d,f]	4.54	2.89	.33***	.57***	.32***	.44***	.46***	.35***	.35***	.74***	.69***			
11. Raise	4.54	3.07	.11	.33***	.15	.24***	.16	.18	.12	.42***	.34***	.38***		
12. Negative affectivity[b]	1.75	0.65	−.22***	−.12	−.26***	−.33***	−.03	−.10	−.11	−.11	−.11	−.05	−.06	.88

[a] Coefficient alpha reliability estimates are shown on the diagonal; no estimates are given for one-item measures.
[b] This was a 7-point scale.
[c] This was a 5-point scale.
[d] This was a 9-point scale.
[e] This scale measured a component of procedural justice.
[f] This scale was a measure of distributive justice.
*** $p < .001$

TABLE 3
Effects of Procedural and Distributive Justice[a]

(a) Regression Analyses

Independent Variables	Organizational Commitment		Satisfaction with Raise		Trust in Supervisor	
	b	β	*b*	β	*b*	β
Components of procedural justice						
Feedback	.23 (.13)	.29*	.16 (.08)	.23*	.66 (.19)	.47*
Planning	.01 (.10)	.01	−.02 (.06)	−.05	.21 (.14)	.20
Recourse	.01 (.05)	.03	.04 (.03)	.10	.17 (.08)	.18*
Observation	.02 (.05)	.05	.00 (.03)	.00	−.10 (.07)	−.12
Distributive justice						
Favorability of raise	−.08 (.08)	−.14	.05 (.05)	.12	−.06 (.11)	−.06
Raise related to performance	.07 (.06)	.15	.03 (.04)	.10	−.03 (.09)	−.04
Distributive justice index	.08 (.07)	.15	.11 (.05)	.28*	.07 (.11)	.07
Negative affectivity	−.29 (.19)	−.13	.20 (.12)	.13	−.13 (.28)	−.03
Raise	−.03 (.04)	−.08	.01 (.02)	.03	−.03 (.06)	−.04
R^2	.24**		.51**		.38**	

(b) Usefulness Analysis[b]

Components of procedural justice beyond distributive justice	.109**	.086**	.250**
Distributive justice beyond components of procedural justice	.022	.187**	.005
Components of procedural justice and distributive justice	.49**	.71**	.62**

[a] Standard errors are in parentheses.

[b] In the usefulness analysis, where the entry indicates *x* beyond *y*, it means the increment in the square of the multiple correlation coefficient when *x* is added following *y*. Otherwise, the entry is the multiple correlation coefficient.

* $p < .05$

** $p < .01$

with pay satisfaction. A structural equation analysis using the LISREL VI program (Jöreskog and Sörbom, 1984) confirmed these results.[2]

DISCUSSION

The question of whether attitudes toward an organization, its authorities, and the outcomes it provides show the same relationships with distrib-

[2] The results of the structural-equations modeling analysis using LISREL VI are available from the authors.

utive and procedural justice as have emerged in legal and political contexts guided this research. Clearly, the answer is yes. As Table 3 indicates, perceptions of distributive justice are uniquely associated only with satisfaction regarding an individual's own outcomes (i.e., pay satisfaction). On the other hand, only perceptions about the procedures used in determining pay raises make a unique contribution to organizational commitment and trust in supervisor.

Indeed, procedural justice also makes a significant contribution to pay satisfaction. Tyler, Rasinski, and McGraw (1985) also found that both procedural and distributive justice contributed significantly to variance in outcome satisfaction; nevertheless, as our introduction noted, the contribution of distributive justice in their study was nearly twice that of procedural justice. The results of our usefulness analysis show virtually the same ratio of contributions, supporting the general hypothesis that procedural justice makes relatively less of a contribution—not that it is incapable of making any unique contribution to outcome satisfaction at all. Thus, these results imply a strong overall impact of procedural justice.

Because our design was cross-sectional, the present data do not provide conclusive proof of the proposed causal order from perceptions about justice to the criterion variables. That is, the order could run from the latter variables to the former; for instance, level of commitment could influence responses concerning procedural justice. But although our data are cross-sectional, the methodologically stronger grounds of a longitudinal study (Tyler, 1987) have provided evidence for a causal order running from procedures to institutional-level evaluations in a legal context. Future studies should capitalize on opportunities for panel surveys in order to test this causal order in organizational settings.

Alternative interpretations of our data based on common method variance are also possible, although the differential impact of distributive and procedural justice on the criterion variables renders them somewhat implausible. For example, postulating a similar response bias across measures is inconsistent with distributive justice's having made a unique contribution to pay satisfaction but not to commitment and trust. Our use of negative affectivity as a control measure provided an additional form of protection against response-response bias.

Despite limitations, our findings are noteworthy in pointing to a remarkable consistency across three research domains—legal, political, and organizational.[3] The generality of such results suggests that apart from their

[3] There is also evidence for consistency across organizations. Data have been gathered from 37 employees at a different organization (Konovsky, Folger, & Cropanzano, 1987) in a preliminary attempt to verify the relationships investigated in the current study. Although the group was too small to warrant firm conclusions, the results were entirely consistent with the current results: the contribution of procedural justice beyond that of distibutive justice was significant for trust and commitment but not for pay satisfaction, whereas the contribution of distributive justice beyond that of procedural justice was significant only in the case of pay satisfaction. These results help establish that our present results are not sample-specific.

desire for fair outcomes, people care a great deal about the justice of decision-making procedures. Moreover, as the issue moves from the level of personal satisfaction with present outcomes to higher-order issues regarding commitment to a system and trust in its authorities, these procedural concerns begin to loom larger than the distributive ones emphasized by equity theory.

If these concerns are indeed so important, why have procedural justice issues been so long neglected? One reason may be that procedures are often regarded simply as means to an end. According to this instrumental perspective, procedures should be evaluated according to their capacity for effecting fair outcomes, which implies that procedural justice means very little because it refers only to actions designed to yield distributive justice. Such an outcome-driven perspective, however, cannot account for the unique contribution made by procedural justice to certain criteria when distributive justice ratings were statistically controlled. These findings emerged from our data on organizational commitment and trust in supervisor; hence, they raise the following question: What other aspects of procedures exist that can, when stripped of their relationship to distributive justice ratings, retain an association with attitudes toward institutions and their authorities?

One answer is that procedures have both instrumental and noninstrumental aspects. Instrumentally, procedures are means to the ends of distributive justice, as when procedures used for allocation decisions about raises include ways of accurately measuring performance. Because controlling for perceived distributive justice eliminates this aspect, what remains is the noninstrumental aspect of procedures as ends in themselves (cf. Tyler & Caine, 1981; Tyler, Rasinski, & Spodick, 1985). To call procedures ends in themselves simply means that in addition to being the means for obtaining tangible outcomes like raises, they also provide intangible or symbolic outcomes, such as respect. Fair procedures can indicate that an appraiser respects the dignity of an appraisee sufficiently to make decisions in a particular manner—one that philosophers of justice (Dworkin, 1977; Rawls, 1971) see as conveying regard for people's dignity and self-respect. Such procedural actions treat human beings as ends rather than means and treat them as entitled to respect and concern that are symbolic outcomes of *how* a decision-making process is implemented, regardless of *what* tangible outcomes are provided.

Our procedural justice factors are interpretable as indicating employees' interest in such forms of respect. Factor 1, feedback, for instance, contains items stressing groundedness in evidence (e.g. familiarity with performance) as well as items stressing the candor, consistency, and ethicality of the feedback given by a supervisor; all these items show various forms of respect. Other items on the same factor are aspects of two-way communication: employees' having an opportunity to express their side and supervisors' allowing employees' input before making a recommendation and considering their views. These aspects of two-way communication evidence respect in the form of regard for an employee's opinions.

Rawls observed that "among other things, respect for persons is shown by treating them in ways that they can see to be justified" (1971: 586). Similarly, Bies suggested that people experience moral outrage when an explanation for a decision is not provided or is inadequate (for supporting evidence, see Folger, Rosenfield, and Robinson, 1983). Items on this study's recourse factor, including opportunities to find out why a raise was the size it was, to discuss how performance was evaluated, and to make an appeal, fall into this category.

Finally, respect is also shown by informing people of performance appraisal criteria in advance rather than using unexpected criteria. A review of objectives for improvement and standards for future evaluations similar to the items on the planning factor would ensure that employees have received adequate notice of performance criteria. Indeed, the concept of adequate notice is crucial to procedural due process in legal contexts (Forkosch, 1958).

Thus, noninstrumental procedural justice can be interpreted in terms of features—actions taken and opportunities provided by a decision maker—that convey respect for employees' rights and imply that employees are ends rather than means. We now consider why a collateral, pure strain of distributive justice, reflecting the perceived fairness of outcomes regardless of how the pay raises were decided, made no unique contribution to trust and commitment.

When the responses associated with how a decision was made are statistically removed, the residual measure of perceived distributive justice constitutes attention paid to strictly quid pro quo matters concerning fairness in the exchange of labor for compensation. Employees have already paid for their compensation by providing labor, so an organization is showing employees no additional respect beyond what they have already earned. Theoretically, any appraiser examining the same information about an employee's performance contribution should make the same allocation, meaning that there is no basis for attributing any unique qualities to the person responsible for the allocation decision (cf. Jones & Davis, 1965). Such attributional circumstances also imply that the organization has not done anything to distinguish itself from any other organization, because all organizations are expected to provide "a fair day's pay for a fair day's work," so employees have no reason to feel commitment toward the particular organization for which they are working.

Kerr and Slocum argued that organizational commitment is stifled by a culture that tightly specifies obligations and overemphasizes the contractual fairness of exchange: "Neither party recognizes the right of the other to demand more than was originally specified" (1987: 103). Rather than treating people as ends, those authors continue, "the contract . . . is utilitarian, since each party uses the other as a means of furthering its own goals" (1987: 103). This utilitarian and contractual approach contrasts sharply with the philosophy of companies where "everyone recognizes an obligation that goes beyond the simple exchange of labor for salary"; in the latter, "commitment to the organization (loyalty) is exchanged for the organization's

long-term commitment to the individual (security)" (Kerr & Slocum, 1981: 101). Paradoxically, designing appraisal instruments in the interests of distributive justice—so that the element of judgment is minimized and allocation decisions can be made on the basis of strict input-outcome formulas—may vitiate a sense of procedural justice essential to establishing grounds for trust and commitment.

The implications of attending to procedural justice rather than distributive justice alone are likely to be far-reaching. Our results imply that to be maximally effective in sustaining employee commitment to an organization and trust in its management, those making allocative decisions—and other organizational decisions generally—must take procedural justice into account. Furthermore, recent research by Tyler (forthcoming) has shown that procedural justice has a significant impact on compliance with law. Our study's evidence of generalizability from legal to organizational settings is thus only the first step in what should become a sustained research effort to include behavioral measures like compliance as well as measures implied by our analysis of noncontractual obligations like organizational citizenship behaviors. Related evidence has demonstrated that an index of "organizational experiences" was strongly associated with intention to leave (Lee & Mowday, 1987), and in our opinion approximately half the items on that index were procedural in nature.

It is clear that the procedures used to make decisions about rewards have substantial impact. Kerr and Slocum noted, "The reward system . . . is an unequivocal statement of the organization's values and beliefs" (1987: 99). We would add that a key aspect of reward systems involves not only the *what* of rewards that equity theory has emphasized, but also the *how* emphasized by work on procedural justice. Our results lend credence to Lind and Tyler's conclusion that "the great practical value of procedural justice lies in its capacity to enhance . . . positive evaluations of the organization. . . . Fair procedure may be one of the crucial elements of organizational viability" (1988: 191).

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