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An Integrative Framework for Explaining Reactions to Decisions: Interactive Effects of Outcomes and Procedures

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The authors suggest that procedural and distributive factors interactively combine to influence individuals' reactions to their encounters with other people, groups, and organizations. Results from 45 independent samples (reviewed herein) show that (a) level of procedural justice is more positively related to individuals' reactions when outcome fairness or valence is relatively low and (b) level of outcome fairness or valence is more positively related to individuals' reactions when procedural justice is relatively low. They present various explanations of the interaction effect. Theoretical progress may be achieved through future efforts to delineate the conditions under which each of the explanations is more versus less likely to account for the interaction.

Psychologists have long been interested in explaining individuals' reactions to their encounters with other people, groups, and organizations. Indeed, inquiry into this topic over the past 35 years has consisted of three major waves. The first wave of theory and research dealt with distributive issues, that is, the effects on individuals of the *outcomes* associated with their relationships or encounters. For example, social exchange theorists suggested that people react more favorably when the valence of the outcomes which they receive is relatively positive (Homans, 1961). Equity theory also provided a prominent outcome-oriented viewpoint. According to equity theorists, *distributive justice*—defined as the perceived proportion of individuals' inputs into and outcomes derived from the relationship in comparison with the inputs and outcomes of relevant others—shapes individuals' work motivation and job satisfaction (Adams, 1965; Walster, Walster, & Berscheid, 1978).

The second wave of theory and research revealed that individuals' reactions also depend on the fairness of the *procedures* used by the other party to plan and implement resource allocation decisions. Most notably, Thibaut and Walker's (1975) path-breaking research showed that procedural justice influenced individuals' reactions to the outcomes they received, as well as their evaluations of the parties responsible for the decision. Thibaut and Walker's definition of *procedural justice* incorporated two types of input into decisions: (a) process control, referring to how much people are allowed to present evidence on their behalf before the decision is made, and (b) decision control, that is, whether individuals have any say in the actual rendering of the decision.[1]

Since Thibaut and Walker's (1975) initial theorizing, it has been suggested that many additional factors influence peoples' perceptions of procedural justice. For example, Leventhal, Karuza, and Fry (1980) posited that procedures are judged as fair if they are implemented (a) consistently, (b) without self-interest, (c) on the basis of accurate information, (d) with opportunities to correct the decision, (e) with the interests of all concerned parties represented, and (f) following moral and ethical standards. More recently, procedural justice also has been shown to depend on the interpersonal behavior or conduct of the parties who make resource allocation decisions. Two factors are central to the interpersonal aspect of procedural justice (which Bies, 1987, dubbed "interactional justice"): (a) whether the reasons underlying the resource allocation decision are clearly and adequately explained to the affected parties (Bies, Shapiro, & Cummings, 1988) and (b) whether those responsible for implementing the decision treat the affected individuals with dignity and respect (Bies & Moag, 1986; Folger & Bies, 1989; Greenberg, 1993).

Initial research on procedural justice was designed to differentiate the construct from outcome fairness or valence. Methodologies were used that separated the effects of the outcome and procedural variables (e.g., multiple regression in which both terms were entered as predictors or laboratory studies in which the two constructs were manipulated orthogonally). The conceptual questions posed in previous research tended to focus on the main effects of the outcome and procedural variables (although see Folger, Rosenfield, & Robinson, 1983, for an exception). For example, it has been shown that distributive justice is more influential than procedural justice in determining individuals' satisfaction with the results of a decision, whereas procedural fairness is more important than outcome fairness in determining individuals' evaluations of the system or institution that enacted the decision (Cropanzano & Folger,

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[1] The following terms are used interchangeably throughout this article: (a) *justice* and *fairness* and (b) *distributive* and *outcome*. Moreover, our focus throughout is on the causes and especially the consequences of individuals' *perceptions* of justice, rather than on any objective definition of justice.

1991; Folger & Konovsky, 1989; Greenberg, 1990; Lind & Tyler, 1988; McFarlin & Sweeney, 1992; Sweeney & McFarlin, 1993; Tyler & Caine, 1981; Tyler & Lind, 1992).[2]

Previous theorists and researchers have clearly established the conceptual and empirical distinctions between the outcomes and procedures associated with exchange relationships. As Greenberg (1990) has pointed out, however, significant theoretical advances in the justice and social exchange literatures may be achieved through the differentiation *and* integration of key concepts. Whereas previous research separated the effects of procedural and distributive factors, this article is designed to provide an integrative analysis of their effects.

Our central thesis is that whereas perceived outcome favorability differs from individuals' perceptions of procedural fairness, their impact cannot be studied in isolation from one another. The effects of procedural justice on individuals' reactions to a decision depend on the level of outcome favorability; similarly, individuals' reactions to outcome favorability depend on the degree of procedural fairness with which the decision is planned and implemented. As Cropanzano and Folger (1991) suggested, "outcomes and procedures work together to create a sense of injustice. A full understanding of fairness cannot be achieved by examining the two constructs separately. Rather, one needs to consider the interaction between outcomes and procedures" (p. 136).

The purpose of this article is to contribute to a more complete understanding of the nature of exchange relationships by reviewing studies in which researchers evaluated the interactive effects of outcome fairness or valence and procedural fairness on individuals' reactions to a decision. This emerging body of research is important for at least two reasons. First, it represents a noteworthy departure from previous studies in which researchers examined the distinct (i.e., main) effects of procedural and distributive factors. In fact, some researchers whose conceptual questions led them to focus on the main effects have not even evaluated the statistical significance of the interaction effect (e.g., Folger & Konovsky, 1989; Lind & Tyler, 1988; Sweeney & McFarlin, 1993; Tyler & Caine, 1981). Research in which the interaction effect was not explored, however, may be criticized on several counts. For one, if procedural fairness and outcome favorability actually interact, then researchers who examined only the main effects may have made a significant error of omission. That is, variance attributable to these two factors may have been left unexplained. Even more serious is the possibility that conceptual models based on main effects alone may have been misspecified. That is, the significance of either or both main effects may in fact have been due to the (omitted) interaction. In either case, by calling attention to the interactive relationship between procedural fairness and outcome favorability, we further elucidate the determinants of individuals' reactions to a resource allocation decision.

Second, the interaction effect is well-grounded theoretically. In fact, four explanations which have appeared in the justice literature provide possible accounts of the interaction effect. Further empirical research is needed to evaluate whether a particular explanation provides a viable account of the interaction. Moreover, further conceptual work is needed to contrast the various explanations. A comparative analysis of the various explanations is likely to suggest that each has its domain of relevance, that is, each explanation is likely to be more applicable under certain conditions than others.

The remainder of this article is divided into five sections. First, we describe the form of the interaction effect. Second, we present the various explanations of the interaction effect. Third, we analyze some similarities as well as differences between the theories. Fourth, we offer several areas for further research. Finally, we consider some of the practical implications of the interaction effect.

Describing the Form of the Interaction

Although many researchers have examined the interactive relationship between procedural fairness and either outcome fairness or outcome valence, they have been motivated by three somewhat different conceptual questions. One group of researchers has sought to establish the conditions under which the degree of procedural fairness has more versus less effect on individuals' reactions to a decision. Taking as their point of departure research which established significant main effects of procedural justice, these researchers have evaluated the conditions under which procedural justice is more versus less likely to influence peoples' reactions to a decision. In this approach, the distributive variable is conceived to be a moderator of the effects of procedural justice (e.g., Shapiro, 1991).

A second group of researchers has attempted to delineate the circumstances under which outcome favorability affects individuals' reactions. Taking as the point of departure the assertion that people should respond more positively to relatively favorable outcomes, these researchers sought to establish the boundary conditions for this basic "truth." In this approach, procedural fairness is conceived to be a moderator of the impact of the outcome variable (e.g., Brockner et al., 1994).

A third guiding question is whether the joint presence of a particular set of circumstances elicits reactions different from

[2] Outcome *fairness* and outcome *valence* differ from one another; the former refers to the legitimacy of the outcome in relation to the prevailing definition of justice, whereas the latter refers to the extent to which the individual is materially benefitted by the decision. Although different, outcome fairness and outcome valence are closely related. For example, equity theory (Adams, 1965) posits that individuals' perceptions of outcome fairness are determined by the relationship between outcome valence and the magnitude of their inputs (in comparison with the outcomes and inputs of relevant targets). According to equity theory, therefore, positive outcomes are seen as more fair than negative outcomes, especially if people believe that their inputs are relatively high. In fact, research on the egocentric bias has shown that people generally have high estimates of their inputs. If anything, people often overestimate the magnitude of their contributions to exchange relationships (Messick & Sentis, 1979; Ross & Sicoly, 1979; Walster et al., 1978), thereby leading them to believe that positive outcomes are fair.

In short, outcome fairness and outcome valence overlap conceptually to a great extent. Furthermore, in the next footnote, we present considerable empirical evidence on the similarity between the two. The findings to be presented suggest that although the two constructs are not identical, for present purposes, it is more appropriate to focus on the convergence rather than on the divergence between outcome fairness and outcome valence. Here after, the term *outcome favorability* is used to describe a construct that captures the (considerable) overlap between perceived outcome fairness and perceived outcome valence.

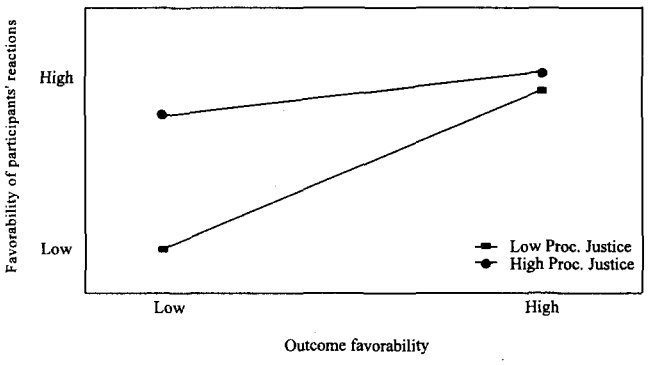

Figure 1. Representation of the modal interactive effect of procedural (Proc.) justice and outcome favorability on reactions to decisions.

those observed in all other conditions. For example, Folger's (1987) referent cognitions theory (RCT) suggests that when unfavorable outcomes are accompanied by low procedural fairness, people react especially negatively, relative to all other combinations of conditions.

Actual Results

Although prompted by somewhat different questions, many researchers have evaluated the interactive effects of distributive and procedural factors on peoples' cognitive, affective, and behavioral reactions to a decision. In fact, most of the studies are only recently published, in press, or still under editorial review; a handful of studies consist of raw data that are in the process of being converted into manuscripts. Therefore, at this point in time, many readers are unlikely to be aware of the pervasiveness of the empirical findings to be reported. The most frequently observed pattern of results to emerge across 45 independent samples is shown in Figure 1. The actual findings can be described in three ways. First, when outcomes are unfair or have a negative valence, procedural justice is more likely to have a direct effect on individuals' reactions. Second, when procedural justice is relatively low, outcome favorability is more apt to be positively correlated with individuals' reactions. Third, the combination of low procedural fairness and low outcome favorability engenders particularly negative reactions.

Criteria for Inclusion

Studies were included in this analysis if their researchers examined the interaction between procedural fairness and either outcome fairness or outcome valence. Some of the studies were conducted under controlled experimental conditions, in which the independent variables were usually manipulated. For example, in a study by Greenberg (1993), participants worked on a clerical task and were either paid equitably (i.e., in proportion to their performance) or not. Two procedural fairness variables were orthogonally manipulated: (a) the validity of the method used to determine how well individuals had performed and (b) the social sensitivity with which the experimenter treated participants during the study. The latter is a component of interactional justice. The primary dependent variable was theft, that is, the extent to which participants took money that was not rightfully theirs. Results yielded interaction effects between outcome fairness and each of the procedural fairness dimensions, such that participants responded most negatively (they stole the most) when unfair outcomes were combined with unfair procedures.

Other studies were performed in the field, in which the independent variables were usually measured. For instance, McFarlin and Sweeney (1992) administered a survey to 1,100 employees of a midwestern bank, which included measures of the distributive fairness of the institution's reward system (e.g., "How fair has the company been in rewarding you when you consider the amount of effort that you put into your work?" p. 629) and the procedural fairness with which rewards were allocated (e.g., "How fair were the procedures used to determine pay increases?" p. 629). Also included in the survey were dependent measures, which included organizational commitment (e.g., "I feel myself to be a part of this company," p. 629). McFarlin and Sweeney discovered an interactive effect of distributive and procedural justice on organizational commitment, the nature of which resembled the pattern exhibited in Figure 1.

The contextual diversity of the studies is particularly striking. For example, procedural fairness was operationalized in numerous ways. In some studies, specific elements of procedural fairness were manipulated or measured including process control (e.g., Cropanzano & Konovsky, 1995), advanced notice (e.g., Brockner et al., 1994), and interactional justice (e.g., Greenberg, 1993). In other studies, procedural justice was assessed generically by having participants rate the overall fairness of the decision-making process (e.g., Lind, 1994b).

The outcome factor also was operationalized in a variety of ways. In some studies, participants evaluated the fairness of the outcomes they had received (e.g., McFarlin & Sweeney, 1992). In other studies, the outcome variable was operationalized in the form of valence. For example, in one study, participants either won or lost an arbitration hearing (Lind & Lissak, 1985); in another, they were either hired for a job or not (Gilliland, 1994).[3]

The settings in which the studies were conducted were also quite varied. Most of the field studies were performed in the legal arena or work organizations. Moreover, the field studies in work organizations explored current (or former) employees' reactions to a variety of organizationwide changes such as a layoff (Brockner, DeWitt, Grover, & Reed, 1990), relocation (Daly & Geyer, 1995), pay freeze (Schaubroeck, May, & Brown, 1994), onset of a smoking ban (Greenberg, 1994), and introduction of a drug-testing policy (Cropanzano & Konovsky, 1995). In other field studies conducted in business organiza-

[3] Three different types of empirical evidence attest to the convergence between outcome fairness and outcome valence. First, across the many studies reviewed in Table 1, the form of the interaction effect was identical, regardless of whether the outcome variable referred to fairness or valence. Second, in several laboratory studies, experimental manipulations of outcome valence were shown to have a causal effect on participants' perceptions of outcome fairness (Schroth & Shah, 1993; van den Bos et al., 1995). Third, several field studies also have established strong correlations between participants' perceptions of outcome fairness and outcome favorability (Greenberg, 1994; Tyler & Caine, 1981).

tions, researchers examined workers' reactions to individually targeted events such as a pay raise (McFarlin & Sweeney, 1992), punishment (Trevino, 1993), and recent encounter with their supervisor (Tyler, 1995). The field studies also incorporated a wide variety of dependent variables including organizational commitment (Greenberg, 1994), job performance (Trevino, 1993), turnover intention (Brockner et al., 1990), trust in management (Schaubroeck et al., 1994), perceptions of procedural and distributive justice (Cropanzano & Konovsky, 1995), and attitudes toward external constituencies such as unions (Mellor, 1992) and the government (Brockner et al., 1994). The dependent variables in the laboratory experiments also incorporated a variety of measures, including perceived fairness (e.g., Schroth & Shah, 1993), affect (e.g., Folger et al., 1983), and behaviors such as theft (Greenberg, 1993) and task performance (Magner, Rahman, & Welker, 1995).[4]

Most of the studies were conducted in the United States. Recent research by Bierbrauer, Leung, and Lind (cited in Lind, 1994a, 1994b) and van den Bos, Vermunt, and Wilke (1995) illustrated, however, that the interaction effect is cross-culturally generalizable. That is, the pattern exhibited in Figure 1 was obtained in one German sample, two Hong Kong samples, and four Dutch samples. The fact that consistent results emerged across a large number of diverse settings reflects the validity of the interactive relationship.

Table 1 provides relevant details of each of the studies in which a significant interaction was obtained on at least one major dependent variable. The phrase *predicted interaction* in the Results column of Table 1 refers to the pattern of findings described above and shown in Figure 1. The phrase *contrary interaction* refers to results opposite to those described above. Contrary interactions were rare and tended to be found on a particular type of dependent variable, self-evaluations. We have more to say later about why the interactive relationship may have taken a different form on measures of self-evaluation. For now, it can be concluded that the interactive relationship exhibited in Figure 1 is a robust finding.[5]

One of the major conclusions of this review of studies is that procedural fairness and outcome fairness–valence yielded a similar interaction effect across a wide variety of dependent variables (with the exception of self-evaluations). The fact that the dependent variables were so diverse gave rise to our decision to not perform a meta-analysis. Typically, meta-analysis requires grouping studies on the bases of the conceptual independent and dependent variables. Whereas we believe that all of the studies included operationalizations of the independent variables of procedural fairness and outcome favorability, we felt far less certain about imposing a construct on the (quite varied) operationalizations of the dependent variables. Indeed, once studies were grouped into different categories on the basis of the dependent variable (e.g., studies in which researchers examined perceived fairness in the laboratory or those exploring organizational commitment in the field), the number of studies within each category was relatively low. In summary, the major empirical finding is that the interaction effect is quite consistent across many dependent variables, even though the dependent variables constitute a fairly diverse set. As more researchers conduct studies within each of the various categories of dependent variables, meta-analytic procedures should become more appropriate.

Explaining the Interaction Effect

The interaction effect may be accounted for by at least four explanations that have appeared in the justice literature. Two of them—RCT (Folger, 1986) and attribution theory (Folger, Rosenfield, & Hays, 1978; Lind & Lissak, 1985)—were explicitly designed to account for the interactive impact of the distributive and procedural variables. The other two explanations—self-interest theory (Thibaut & Walker, 1975) and group value theory (Lind & Tyler, 1988)—were originally proposed to explain why people generally prefer procedural fairness. Said differently, the latter two explanations were originally offered as accounts of the main effect of procedural fairness (rather than as explanations of the interactive relationship between proce-

[4] At first glance, it may seem unusual that perceptions of procedural justice, distributive justice, or both served as dependent variables in some studies (e.g., Cropanzano & Konovsky, 1995; Lind & Lissak, 1985; Schroth & Shah, 1993; van den Bos et al., 1995); after all, these two constructs supposedly were the independent variables. Perceived fairness was included as a dependent variable only in those studies in which specific hypothesized antecedents of procedural or distributive fairness served as independent variables. For example, in some studies, procedural fairness was operationalized as an independent variable through variations in consistency (Schroth & Shah, 1993, Study 1), accuracy (Greenberg, 1987), process control (LaTour, 1978), and interactional justice (Folger et al., 1983). Thus, perceptions of fairness as dependent variables in these studies are analogous to the use of "manipulation checks" in experimental research, in which the researcher evaluates whether an antecedent of a psychological state had its intended effect. In studies in which justice was operationalized as an independent variable by having participants make global judgments of overall fairness (e.g., McFarlin & Sweeney, 1992), perceived fairness was not included as a dependent variable.

[5] Although many studies yielded the identical interaction effect, there were several instances in which (a) no significant interaction emerged on any of the main dependent variables in a given study (e.g., Dipboye & de Pontbriand, 1981; Lind, Kurtz, Musante, Walker, & Thibaut, 1980; Shapiro, Buttner, & Barry, 1994, Study 2; Tyler & Caine, 1981, Study 1; Walker, LaTour, Lind, & Thibaut, 1974) or (b) "contrary" interaction effects emerged on measures other than self-evaluations. Examples of the latter findings include the results of studies by Leung and Li (1990), Shapiro et al. (1994, Study 1), and Tyler and Caine (1981, Study 3), in which outcome favorability had a greater effect when procedural fairness was relatively high. Even several of the reports cited in this footnote, however, yielded partial support for the usual interactive relationship shown in Figure 1. For example, Shapiro et al. performed multiple studies and found the typical interaction effect on several dependent variables in Study 1 (i.e., the perceived fairness of, and satisfaction with, the procedures used to make the resource allocation decision). However, these findings did not appear in the research report (D. L. Shapiro, personal communication, June 15, 1995). Leung and Li conducted a single study. In addition to their results described earlier in this footnote, they discovered that procedural fairness had a significant effect on peoples' reactions to the negative (but not the positive) component of outcome feedback. Such findings are consistent with the typical interaction, although Leung and Li did not report whether the interaction effect was statistically significant. Lind et al. generally found only main effects of procedural fairness and outcome valence on their primary dependent variables. However, on several other measures (e.g., perceptions of the opponent's acceptance of the decision), the typical interaction effect emerged. In summary, although some studies did not obtain the interaction shown in Figure 1, the set of findings across studies suggests that the interactive relationship is reliable.

dural fairness and outcome favorability). Nevertheless, the nature of both self-interest theory and group value theory suggests that these viewpoints also may be extended to account for the interaction effect.

Each of the four explanations is presented in this section of the article. In the next section, we elaborate on a feature that all of the explanations share, the underlying assumption that people seek to make sense of their environments in response to events that are unexpected, negative, or both. In the subsequent section, we also identify differences between the various explanations. The analysis of differences between explanations may help shed light on the conditions under which a particular viewpoint is more or less likely to account for the interaction effect.

Referent Cognitions Theory

The first sustained attempt to account for the interaction effect was provided by Folger's (1986) RCT. In its initial form, RCT suggested that negative reactions to a resource allocation decision occur when two conditions are met: (a) the outcomes associated with the decision are considerably lower than easily imagined alternative outcomes and (b) the procedures that give rise to the outcomes are unfair, thereby rendering the outcomes unjustified. For example, procedures that do not consider the input of individuals affected by the decision are usually seen as unjustified (Lind & Tyler, 1988). Similarly, if individuals are not provided with a clear and adequate explanation of the reasons for the decision, they are more likely to view the outcomes as unjustified (Bies, 1987). In several studies, Folger and his colleagues found that when unfair procedures were combined with unfavorable outcomes, participants felt much more resentful than they did in all other conditions.

When procedures are fair, for example, when people have input into a decision (Cropanzano & Folger, 1989), when they are given a good explanation of why a decision was rendered (Folger et al., 1983), or both, it is more difficult for them to imagine alternative outcomes that exceed the ones they received; that is, outcomes resulting from fair procedures are more likely seen as justified. Thus, people should respond relatively favorably when procedures are fair, regardless of the outcome.

In a recent extension of RCT, Folger (1993) suggested that attributes of procedural fairness that do not *cause* outcomes but rather *accompany* them—for example, interactional justice facets such as whether recipients were treated with dignity and respect—may also interact with outcome favorability. Folger's more recent theorizing suggests that decision makers have multiple obligations to the recipients of the decision, which include the provision of equitable outcomes and the use of fair procedures to decide on outcomes. In addition, decision makers are morally obligated to treat the recipients in a humane, respectful manner. Decision makers' conduct in implementing the decision, although not necessarily reflective of how the decision itself was arrived at, provides information about whether decision makers have met their moral obligations. As Folger (1993) put it,

> all aspects of the agent's conduct, *whether or not they have a direct bearing on employee compensation or the means for determining compensation* [italics added], can carry implicit messages about whether the agent views the employee as someone worthy of that minimal level of respect to which all humans should be entitled." (p. 175)

As in the original version of RCT, outcomes—whether economic or psychological in nature—that are lower than easily imagined alternative outcomes are necessary but not sufficient for individuals to react negatively to the decision maker. Whether unfavorable outcomes give rise to negative reactions depends on the decision makers' conduct or behavior. When unfavorable outcomes are accompanied by improper conduct, recipients feel particularly resentful toward decision makers. However, exemplary or even socially acceptable conduct that fulfills the decision makers' moral obligations dissociates them from unfavorable outcomes, thereby eliciting weaker feelings of resentment. In summary, RCT suggests that the joint presence of (a) unfair procedures (more recently defined to include the conduct of the decision implementers) and (b) unfavorable outcomes elicits greater resentment than any other combination of conditions.

Self-Interest or Instrumental Hypothesis

The self-interest hypothesis assumes that people are motivated to maximize the concrete or material outcomes they receive from their exchange relationships (Thibaut & Walker, 1975). Although self-interest theory was originally designed to explain the main effect of procedural justice, we describe next how it may also account for the interaction effect between procedural justice and outcome favorability.

Although people ideally would prefer to maximize their outcomes in both the short and long term, they are relatively unaffected by negative short-term outcomes, provided that they are optimistic about their outcomes over the longer haul. Optimism about longer term outcomes, in turn, depends on two factors: (a) the expected level of favorability of the future outcomes and (b) the perceived certainty of individuals' outcome expectations. Optimism about future outcomes is highest when (a) the expected level of outcome favorability is high and (b) the felt certainty of individuals' outcome expectations is high.

Procedures used to make resource allocation decisions usually are perceived to be relatively stable and enduring; consequently, people use information about procedures to make inferences about their longer term outcomes. Fair procedures differ from those that are unfair in two respects. First, the perceived favorability of future outcomes should be greater when procedures are more fair. For example, consider an organization in which employees have process control, that is, input into how decisions are made. The provision of process control should lead employees to believe that they can influence their future outcomes in the desired direction, or at least more so than if no process control were offered to them.

Second, the perceived predictability (and hence certainty) of future outcomes is likely to be greater when procedures are relatively fair. For example, procedures that are applied consistently should engender a less variable (and hence more predictable) set of outcomes than procedures which are implemented inconsistently. In other words, unfair procedures may lead people to infer that decisions are made on an arbitrary or capricious basis, thereby making it more difficult for them to be

(*text continues on page 199*)

Table 1
Summary of Studies Yielding Interaction Effects

Study	Participants	Independent variables	Dependent variables	Results
		Field studies		
Adler et al. (1983)	Litigants of a court-annexed arbitration procedure	O: Whether litigants won or lost the arbitration P: Perceived fairness of arbitration procedure	Satisfaction with experience	Predicted interaction
Bierbauer, Leung, & Lind, reported in Lind (1994b)	3 samples of undergraduates in a dispute in which a third party intervened (samples from Germany, Hong Kong, and the United States)	O: Perceived favorability of the outcome of the dispute P: Fairness with which the third party handled the dispute	Acceptance of the third party	Predicted interaction in all three samples
Brockner et al. (1990)	597 employees of retail stores who had survived a layoff	O: Adequacy of organizational caretaking (e.g., severance pay) if they were to be laid off P: Clarity of explanation of reasons of layoff	(1) Organizational commitment (2) Work effort (3) Turnover intention	Predicted interaction on 1 and 3
Brockner et al. (1994), Study 1	218 laid off employees applying for unemployment benefits in an unemployment line	O: Perceived generosity of organization's caretaking (e.g., severance pay) P: Advanced notice	Desire for governmental regulation of layoffs	Predicted interaction
Brockner et al. (1994), Study 2	150 employees at a bank who had survived a layoff	O: Layoff severity P: Interactional justice	Organizational commitment	Predicted interaction
Brockner et al. (1994), Study 3	147 laid off employees who had not yet departed from a manufacturing facility	O: Self-report of how bad the layoff would be for them P: Advanced notice	Organizational commitment	Predicted interaction
Brockner et al. (1995)	193 employees of a manufacturing facility who had survived a layoff	O: Manipulated through framing; attention was focused on either those who left (negative) or those who remained (positive) P: Multi-item scale tapping various facets of procedural justice	Organizational trust and support	Predicted interaction
Cropanzano & Konovsky (1995)	204 employees of a pathology laboratory where a drug-testing policy was introduced	O: Perception of severity of consequences for testing positive P: (1) Advanced notice (2) Voice (3) Presence of grievance (4) Accuracy (5) Interactional justice (6) For-cause testing	Perceived fairness of drug testing (combined procedural and distributive)	Predicted interaction found for each of the following: 1, 2, 5, and 6
Daly (1994)	171 relocated employees of 7 organizations	O: Reason for relocation: expansion (positive) or consolidation–decline (negative) P: Explanation quality	(1) Distributive justice (2) Procedural justice	Predicted interaction on 1
Daly & Geyer (1995)	171 relocated employees of 7 organizations	O: Reason for relocation: expansion (positive) or consolidation–decline (negative) P: Procedural fairness in how relocation was handled	Organizational commitment	Predicted interaction
Gilliland & Beckstein (1995)	106 authors of articles submitted to the *Journal of Applied Psychology* who received a rejection or an invitation to submit a revision	O: Whether author received a rejection (negative) or was invited to revise and resubmit (positive) P: Perceived quality of the explanation received about the basis for the decision	Distributive justice	Predicted interaction

Table 1 (*continued*)

Study	Participants	Independent variables	Dependent variables	Results
Greenberg (1994)	732 nonunion clerical employees in a financial services corporation where a smoking ban had been introduced	O: Smoking level before the ban (the more they smoked, the more negative the perceived outcome) P: (1) Information thoroughness (2) Social sensitivity	(1) Acceptance of ban (organizational commitment, turnover intention, and fairness of ban) (2) Fairness of the procedure used to decide on the ban (3) General attitude toward worksite smoking bans	Predicted interaction between each of the 2 procedural elements and the outcome on 1
Konovsky (1995)	606 hospital employees who had reactions to their supervisor's decisions in general as well as after a most recent one	O: Perceived fairness of the received outcome P: Perceived fairness of supervisor's decision making as defined by Leventhal et al. (1980)	Supervisor satisfaction	Predicted interaction
Lind (1994b)	Litigants in a court-annexed arbitration program	O: Perceived favorability of the case's outcome P: Perceived fairness of the arbitration procedure	Acceptance of the decision	Predicted interaction
Lind (1994a)	Two different samples of workers (one sample from Hong Kong, the other from the United States) who discussed with their supervisors a problem in the workplace—in all cases, supervisors recommended how to redress the problem	O: Perceived favorability of outcomes associated with following their supervisor's recommendation P: Procedural fairness of their supervisor in discussing the participants' problem with them	Willingness to voluntarily go along with the supervisor's recommendation	Predicted interaction in both samples
Magner (in press)	220 U.S. accounting professors during performance appraisals	O: Perceived favorability of their performance appraisals P: Process control over their performance appraisals	(1) Intent to remain with the university (2) Trust in the supervisor (department head)	Predicted interaction on both 1 and 2
McFarlin & Sweeney (1992)	675 employees at a bank	O: Perception of how fairly they had been rewarded in light of contributions P: General measure of procedural justice in allocating outcomes (e.g., determination of pay increases)	(1) Organizational commitment (2) Evaluation of the supervisor (3) Pay level satisfaction (4) Job satisfaction	Predicted interaction on 1 and 2
Mellor (1992)	356 blue-collar manufacturing workers of 15 unionized manufacturing organizations	O: Layoff severity P: Belief in account by the organization implicating the union as the cause of the layoff	Union commitment (the opposite of organizational commitment, given the hostile relationship between the organization and the union)	Predicted interaction
Parks (1995)	229 white-collar workers of a variety of organizations that recently underwent significant changes	O: Distributive justice P: Multi-item scale tapping various facets of procedural justice	(1) Negativism (e.g., negative statements) (2) Shirking work (3) Shirking responsibility (e.g., blaming and covering up) (4) Profiteering (e.g., theft and kickbacks) (5) Hostility (e.g., threats) (6) Endangerment (e.g., assault)	Predicted interaction on 3, 4, 5; marginal on 2
Schaubroeck et al. (1994)	173 salaried nonunion employees of a manufacturing plant in which a pay freeze had been ongoing for 1 year	O: Degree of economic hardship caused by the pay freeze P: Communication of how and why the pay freeze was initiated	(1) Turnover intention (2) Organizational commitment (3) Trust in management (4) Procedural fairness of the pay freeze (5) General job satisfaction	Predicted interaction on all 5 measures

(*table continues*)

Table 1 (*continued*)

Study	Participants	Independent variables	Dependent variables	Results
Schroth & Shah (1993), Study 2	69 undergraduates who had received midterm exam results	O: Perceived outcome fairness P: Perceived fairness of procedures used to judge performance	State Self-Esteem Scale	"Contrary" interaction
Trevino (1993)	79 subordinates from a variety of organizations who had been disciplined by their supervisor	O: Perceived harshness of the punishment P: (1) Counseling (supportive approach by the supervisor) (2) Negative expression (demeanor of the supervisor) (3) Control (process and decision) (4) Explanation adequacy (5) Privacy (6) Arbitrariness (does not adhere to rules and they are imposed too early)	(1) Performance (2) Organizational citizenship (3) Anticitizenship behavior	5 out of 18 possible interactions were significant (a) Outcome × Negative Expression on 2 (b) Outcome × Explanation on 1 (c) Outcome × Explanation on 2 (d) Outcome × Privacy on 1 (e) Outcome × Arbitrariness on 2
Tyler, cited in Lind & Tyler (1988)	People who had an encounter at legal institutions (police stations and courts)	O: Favorability of outcome received in the encounter P: Perceived fairness of procedure	Affect toward authorities	Predicted interaction
Tyler (1995)	340 employees from a variety of organizations who took part in a phone survey in which they were asked about their relationship with their supervisor	O: Extent to which the supervisor was perceived to make decisions favorable to the employee P: Perceived fairness of the supervisor's decision-making procedures (e.g., accuracy, process control, and interactional justice)	Satisfaction with the supervisor	Predicted interaction
		Laboratory experiments		
Cropanzano & Folger (1989)	63 female undergraduates who performed two tasks, performing poorly on the one that "counted"	O: Manipulated referentially; half believed that their outcome would have been better if their performance at the other task counted (negative); half believed that their outcome would have been the same regardless of which task performance counted (positive) P: Whether participant or experimenter chose the task that counted	(1) Fairness in how they were treated (2) Understanding (3) Resentment (4) Blame toward experimenter, self, and other factors for not getting a better outcome	Predicted interaction on 1, 2, and 3
Folger & Martin (1986)	160 undergraduates who experienced a rules change that affected their outcome; all received negative outcome	O: Manipulated referentially; half believed that were it not for the change, they would have done better (negative); half believed that they would have done the same, regardless of the change (positive) P: Presence or absence of a good explanation for the change	(1) Discontent index (anger and resentment) (2) Endorsement of hiring the experimenter for running future research	Predicted interaction on 1
Folger, Rosenfield, & Hays (1978)	50 female undergraduates who were told before working on a task that they would have to work overtime	O: Amount of pay for working overtime (negative inequity or positive inequity) P: Choice in whether to participate after being given description of the pay schedule	(1) Intrinsic motivation in the task (a) Speed with which they returned to the activity (b) Time spent on the activity (c) Self-reported task liking (2) Task performance	Predicted interaction on 1a and 1b; marginal on 1c

Table 1 (*continued*)

Study	Participants	Independent variables	Dependent variables	Results
Folger, Rosenfield, Hays, & Grove (1978)	54 female undergraduates who were asked to perform an "additional" experiment	O: Amount of pay for having taken part in the additional experiment: underpay, equity, and overpay P: Choice of whether to participate in the additional experiment	Task productivity	Predicted interaction
Folger et al. (1983)	60 female undergraduates who experienced a rules change that affected their outcome; all received negative outcome	O: Manipulated referentially; half believed that under the old rules, they would have done better (negative); half thought that under the old rules, they would have done the same (positive) P: Presence or absence of a good explanation of the reason for the change	(1) Feelings about outcome to be received (a) Angry (b) Dissatisfied (c) Upset (d) Resentful (2) Attribution for performance (3) Fairness of outcome received	Predicted interaction on 1a and 1d
Gilliland (1994)	270 undergraduates who did a work sample, while being considered for an actual temporary job	O: Participants were hired or not hired P: (1) Degree of relatedness of work sample for actual work to be done (2) Whether participants received an explanation of why their selection method was chosen	(1) Procedure fairness, overall (2) Distributive fairness (3) Apply for–recommend a similar job in the future (4) Self-efficacy toward job performance (5) Job satisfaction (6) Peformance (a) Quantity (b) Quality	(a) Predicted interaction between Procedure 1 × Outcome on 2 (b) Predicted interaction between Procedure 2 × Outcome on 3 (c) "Contrary" interaction between Procedure 1 × Outcome on 4
Greenberg (1987)	192 undergraduates who performed a clerical task	O: Relative amount of payment given to participants versus other: high (positive) or low (negative) P: Whether payment was based on relative performance or *on an arbitrary factor*	(1) Outcome fairness (2) Procedural fairness (3) Concern over amount of pay received (4) Concern over how pay was determined (5) Task liking (6) Liking the experimenter (7) Behavioral intention: reporting unfair treatment to higher authorities (i.e., an ethical responsibility board)	Predicted interaction on 1, 4, and 7
Greenberg (1993)	102 undergraduates who performed a clerical task	O: Paid equitably or negatively inequitably for their work P: (1) Informational validity of the basis of determining outcome (2) Social sensitivity in delivering information about payment	(1) Theft (2) Distributive justice (3) Procedural justice (4) Interactional justice	Predicted interaction of Procedure 1 × Outcome on 1 and Procedure 2 × Outcome on 1
Korsgaard et al. (1995)	20 intact teams of 109 middle and upper level managers working on a strategy formulation task	O: Whether the leader's decision reflected the group members' preferences (positive) or not (negative) P: Whether the leader showed that the group members' position was attended to (e.g., active listening, taking notes, and rephrasing members' statements)	(1) Procedural fairness (2) Commitment to the leader's decision (3) Change in trust in the leader (4) Change in attachment to the group	Predicted interaction on 1 (at the .07 level) and 2; premanipulation differences on 3 and 4 cloud interpretation of results on these measures

(*table continues*)

Table 1 (*continued*)

Study	Participants	Independent variables	Dependent variables	Results
LaTour (1978)	99 male undergraduates in the role of company president when the organization was on trial (simulation)	O: Either won or lost a simulated legal case P: Single lawyer represented both sides, chosen by the "court" (unfair), or adversarial procedure with two lawyers, each chosen by the participants (fair)	(1) Fairness of trial procedure (2) Satisfaction with trial procedure (3) Amount of opportunity to present evidence (4) Verdict fairness (5) Verdict satisfaction	Predicted interaction on all 5 measures
Lind & Lissak (1985)	120 undergraduates in a similar situation to LaTour (1978)'s participants	O: Either won or lost the case P: Prior presence or absence of a friendly relationship between the judge and the opposing lawyer	(1) Fairness of the procedure, satisfaction with the procedure, and trust in the procedure (2) Fairness and satisfaction with the outcome (3) Control over what happened (4) Perceived opportunity to present evidence	Predicted interaction on 1 and 4
Magner et al. (1995)	64 undergraduate business students working on a proofreading task	O: Whether participants received a resource that greatly facilitated task performance P: Whether stated policy for distribution of the resource was followed (fair) or violated (unfair)	Task performance	Predicted interaction
Sapienza & Korsgaard (1996)	44 graduate business students who played the role of an investor with a portfolio of ventures	O: Whether the owner of the business followed participants' advice (positive) or not (negative) P: Timeliness with which the owner gave feedback about how well the ventures were performing	(1) Procedural fairness of the owner (2) Trust in the owner (3) Commitment to the owner's decision (4) Monitoring of the owner's behavior (5) Continued investment in the owner's ventures	Predicted interaction on 1 (at the .07 level), 2, and 5 (at the .06 level)
Schroth & Shah (1993), Study 1	61 undergraduates who did a managerial assessment task and had a recruiter evaluate their work and indicate whether they would have been hired	O: Participants would or would not have been hired P: Participants were told of procedures used to make outcome decisions; half were told about fair procedures such as objectivity, consistency, and accuracy; half were told about unfair procedures	(1) Procedural justice (2) Distributive justice (3) State Self-Esteem Scale	No interaction on 1 or 2; "contrary" interaction on 3
Schroth & Shah (1993), Study 3	51 undergraduates in a similar situation as Schroth & Shah's Study 1, but this time they were also given feedback midway through working on the task	O: (expected) Participants were told they were doing well or not midway through O: (actual) Same as Schroth & Shah's Study 1 P: Same as Schroth & Shah's Study 1	(1) Procedural fairness (2) Distributive fairness (3) State Self-Esteem Scale	Predicted interaction between Actual Outcome × Procedure on 1 and 2; "contrary" interaction between Expected Outcome × Procedure on 3
Shapiro (1991)	192 female undergraduates who had been deceived	O: Degree of negative outcome suffered because of deceit P: Type of explanation received for the deceit (selfish, selfish and altruistic, or explanation of nonintent to harm)	(1) Explanation adequacy (2) Explanation honesty (3) Feeling of betrayal and of being cheated (4) Division of money between self and deceiver (called "punitiveness")	Predicted interaction on 4
D. M. Taylor et al. (1987)	40 undergraduates who were trying to perform well enough to get "promoted" in the experiment; all were denied promotion	O: In half of the cases, the denial was fair; in the other half, the denial was unfair P: Decision was based on appropriate criteria or capricious, inappropriate criteria	(1) Willingness to engage in collective action against the denying agent (2) Feelings about the decision (satisfied, hopeful, angry, and frustrated)	Predicted interaction on both 1 and 2

Table 1 (*continued*)

Study	Participants	Independent variables	Dependent variables	Results
van den Bos et al. (1995), Study 1	84 Dutch students who read scenarios and were then asked to imagine that they had applied for a coveted job	O: Half were told that they were selected for the job; the other half were told that they had not been selected for the job P: Accuracy of the selection procedure; information about the procedure preceded information about the outcome	(1) Procedural justice (2) Distributive justice	Predicted interaction on both 1 and 2
van den Bos et al. (1995), Study 2	80 Dutch students who read scenarios and were then asked to imagine that they had applied for a coveted job	O: Half were told that they were selected for the job; the other half were told that they were not selected for the job P: Accuracy of the selection procedure; information about the procedure followed information about the outcome	(1) Procedural justice (2) Distributive justice	Predicted interaction on both 1 and 2
van den Bos et al. (1995), Study 3	80 Dutch students who performed an estimation test	O: Half the students received feedback that they had passed the test; the other half received feedback that they did not pass the test P: Accuracy of the grading procedure; information about the procedure preceded information about the outcome	(1) Procedural justice (2) Distributive justice (3) Satisfaction (4) Intention to protest	Predicted interaction on all 4 measures
van den Bos et al. (1995), Study 4	80 Dutch students who performed an estimation test	O: Half the students received feedback that they had passed the test; the other half received feedback that they did not pass the test P: Accuracy of the grading procedure; information about the procedure followed information about the outcome	(1) Procedural justice (2) Distributive justice (3) Satisfaction (4) Intention to protest	Predicted interaction on all 4 measures

Note. O = outcome; P = procedure.

certain about the favorability of their future outcomes. The likely effect of differences in the perceived favorability and predictability of long-term outcomes as a function of procedural fairness is for people to feel more optimistic about their longer term outcomes in response to relatively high procedural fairness. Feeling optimistic about their long-term outcomes, they may assign lesser importance to, and therefore be less affected by, the favorability of their current outcomes.

For example, Schaubroeck et al. (1994) studied employees' reactions to a year-long pay freeze in a manufacturing plant. Half of the participants took part in workshops in which they received multiple cues that the pay freeze procedure was handled fairly. For example, they learned that (a) senior managers made good faith efforts to take employees' concerns into account when making their decision, (b) the pay freeze was applied impartially, and (c) the pertinent facts of the decision process were communicated in a straightforward manner. The other half of the participants were assigned to a low procedural fairness (control) condition in which they were not privy to the information above. Outcome valence was operationalized by having participants rate the extent to which the pay freeze represented an economic hardship to them. Schaubroeck et al. found that when the pay freeze was handled in a procedurally fair way, the degree of economic hardship posed by the freeze was unrelated to employees' trust in and commitment to the organization. Procedural fairness may have led employees to believe that the organization could be trusted to deliver more favorable outcomes to them in the future, thereby reducing the significance of their current outcomes. When procedural fairness was low, however, employees may have felt less trusting toward the organization over the longer haul (and therefore less optimistic about their future outcomes). Consequently, the economic hardship associated with the current event—the pay freeze—loomed larger and was, therefore, strongly related to their reactions (e.g., organizational commitment).

Group Value Theory

Noting the inability of the instrumental hypothesis to explain fully the main effects of procedural and outcome factors on individuals' reactions to a resource allocation decision, Lind and Tyler (1988) proposed the group value theory. The basic assumption underlying group value theory is that people value their relationships with other individuals, groups, organiza-

tions, and even societal institutions. Through their social relationships, people come to know and like themselves. Thus, social interaction and relationships help people satisfy fundamental psychological motives, such as the desire for self-identity and the need for self-esteem.

The procedures enacted by groups and organizations are one of the major vehicles through which social relationships shape individuals' self-identity and self-esteem. Individuals affiliated with a group or organization whose procedures are unfair may experience what Campbell (1990) referred to as *self-identity confusion.* Social identity theorists have suggested that people define themselves through their memberships in various collectives (Tajfel & Turner, 1979). If the collective's actions suggest that its values are in question—for example, when its procedures are unfair—members of the collective may be forced to examine their own personal values. Furthermore, procedural unfairness on the part of the collective may lower members' self-esteem. Unfair procedures symbolize to group members that the collective has little respect for their dignity. Through the process of reflected appraisal (Mead, 1934), individuals' self-esteem could be reduced. Although a detailed comparison between the self-interest and group value model is beyond the scope of this article—see Lind and Tyler (1988) for a thorough analysis—one clear difference should be mentioned. The self-interest model suggests that people care about procedural fairness as a means to some material end; the group value hypothesis posits that procedural fairness is an end in its own right. Although Lind and Tyler's original purpose was to offer group value theory as an explanation of the main effect of procedural justice, the theory may be extended to account for the interaction between procedural justice and outcome favorability.

More specifically, when procedures are fair, individuals' needs for self-esteem and self-identity are likely to be fulfilled. Furthermore, because procedures are viewed as relatively stable, people should feel reassured that they will continue to have their identity and esteem needs met in the future. Consequently, they are relatively unaffected by the concrete outcomes associated with a current decision.

When procedures are unfair, however, individuals' sense of self has been threatened (Lind & Tyler, 1988). The perception that their esteem and identity needs are not likely to be fulfilled—now or in the future, given the perceived stability of procedures—could influence how individuals view the exchange relationship. That is, they may define (or redefine) the relationship as largely transactional or "businesslike" rather than relational (Rousseau & Parks, 1993). In doing so, they should assign greater significance to the material aspects of the relationship, in which case greater levels of outcome favorability should elicit more positive reactions.

Attributional Explanations

Individuals' causal attributions have also been hypothesized to account for the interaction between procedural justice and outcome favorability. According to attribution theorists, people seek to understand the locus of causality for two related yet distinct occurrences: (a) the outcomes of their behavior and (b) the initiation of their behavior. We refer to the former as *outcome* attributions and the latter as *behavior* attributions. In particular, people are motivated to determine the extent to which their outcomes and their behaviors are internally determined, externally determined, or both.

Outcome attributions. Lind and Lissak (1985) had their participants play the role of defendant in a simulated legal proceeding. Level of procedural fairness was operationalized by the presence or absence of an improper (i.e., friendly) personal relationship between the judge and the lawyer for the opposing side. Outcome valence was manipulated in the form of the verdict: Half of the participants won, whereas the remaining half lost. Participants' satisfaction with the procedure revealed an interaction effect: Although people were understandably more satisfied with the procedure when they had won rather than lost, this tendency was much more pronounced when an improper relationship between the judge and the opposing lawyer was present rather than absent.

Lind and Lissak (1985) suggested that their findings were mediated by the causal attributions people made for the outcomes they received. Attributions, in turn, were hypothesized to depend on the relationship between individuals' prior expectations for their outcomes and their actual outcomes. Participants who faced a biasing relationship between the judge and the opposing lawyer should have expected the verdict to go against them. When the actual outcome was not in their favor, they were highly dissatisfied with the procedures, probably because they believed that the biasing relationship influenced the verdict. Those who won the case in the presence of the procedural impropriety were especially satisfied with the procedures; after all, they won the case *in spite of* the biasing relationship between the judge and opposing lawyer. For the winners, procedures—broadly defined—may have been especially satisfying because they were powerful enough to overcome the possibly detrimental effect of the initial impropriety.

Behavior attributions. The interaction between procedural fairness and outcome favorability may also result from peoples' perceptions of the causes of their behaviors. According to self-perception theory (Bem, 1972), individuals infer their attitudes by observing their behavior and the context in which the behavior occurs. Attitude inference is influenced by an attribution process, in which people seek to explain the causes of their behavior. In the words of deCharms (1968), people sometimes see themselves as the "origins" of their own behavior. They may view their behavior as internally motivated, in which case the behavior is taken as evidence of the underlying attitude. Alternatively, people may perceive themselves as "pawns," that is, they may define their behavior as externally motivated, in which case the behavior is less likely seen as evidence of their underlying attitude. In a business organization, the attributions people make for their behaviors could influence their subsequent work attitudes or behaviors. For example, employees may observe themselves working long hours to accomplish the organization's goals. If they make an internal attribution for working long hours, they are likely to feel more committed to the job or organization. If, however, they attribute their having to work long hours to external factors, they are less apt to infer that they are committed to the job or organization.

When an organization's decision procedures are unfair, people may question why they are performing activities that promote the organization's goals. One possible explanation is the anticipated receipt of a favorable outcome. The greater the favorability of the anticipated outcome, the more likely employ-

ees are to reciprocate the favor in the form of organizational commitment. When an organization's procedures are fair, however, people may feel that they *want* to act on the organization's behalf. Perceiving their behavior as internally motivated, they may be less dependent on the anticipated receipt of a favorable outcome to energize their behavior. Indeed, the literature on overjustification suggests that when people initially are internally motivated, the expectation of being extrinsically rewarded to perform the behavior actually may reduce their inherent interest in the activity (Deci & Ryan, 1985).

Note that the reasoning above is consistent with the focal interaction between procedural justice and outcome favorability. Outcome favorability—or at least the expectation of receiving tangible rewards for undertaking an activity—should be more positively related to individuals' interest in performing an activity when procedural fairness is relatively low. In several studies, Folger and his colleagues (Folger, Rosenfield, & Hays, 1978; Folger, Rosenfield, Hays, & Grove, 1978) tested this hypothesis. Half of the participants encountered relatively low procedural fairness; they were asked to work on a task without being given any choice in the matter. The other half experienced high procedural fairness, in that they had chosen to work on the identical activity. Cross-cutting the procedural justice independent variable was a manipulation of outcome favorability. In the high outcome condition, participants were told that they would be handsomely rewarded for performing the activity; whereas in the low outcome condition, they were not. When procedural justice was relatively low, level of outcome favorability was positively related to intrinsic interest in the activity; just the opposite occurred, however, when procedural justice was relatively high.

Debunking an Artifactual Explanation

In addition to the four theory-based explanations of the interaction effect, it could be argued that the findings are an artifact of a possible ceiling effect in the context in which procedures were unfair and outcomes were favorable. That is, if participants responded very positively in an absolute sense under such conditions, then it would be virtually impossible for them to respond *more* positively when fair procedures were combined with relatively favorable outcomes. In contrast, no such ceiling effect would be expected when procedures were unfair and outcomes were unfavorable. In fact, the low ratings found under such conditions would have considerable room for upward movement when fair procedures were coupled with unfavorable outcomes. For example, LaTour (1978) measured participants' reactions to a simulated legal proceeding. Ratings on several dependent variables were especially high in the condition in which positive outcomes were paired with an unfair procedure (e.g., a mean of 8.83 out of a 9-point maximum was found on one measure). As a result, participants' reactions could not be significantly higher when positive outcomes were accompanied by fair procedures. The low ratings found when procedures were unfair and outcomes were negative—for example, a mean of 1.45 was found on the same measure—could be enhanced when fair procedures accompanied the same negative outcomes. In fact, this is precisely what LaTour found, which manifested itself as an interaction between procedural fairness and outcome valence.

Inspection of means in all studies providing such information suggests, however, that this artifactual explanation cannot adequately account for the interaction effect. In fact, participants' ratings were rarely near the top of the scale in the condition in which procedures were unfair and outcomes were favorable. For example, even in the LaTour (1978) study, participants' ratings on other dependent measures were rather modest in the unfair procedure–positive outcome condition (e.g., 5.25 out of a 9-point maximum); nevertheless, the typical interaction effect emerged. Thus, even when participants' reactions to favorable outcomes left room for them to respond more positively when procedures were fair rather than unfair, the presence of procedural fairness had much less of an enhancing effect relative to what was observed when outcomes were unfavorable.

Toward Synthesis of the Explanations

Whereas in the preceding section we described the various explanations of the interaction effect, in this section, we discuss the evaluation of them, both collectively and individually. The evaluation of the explanations as a collective includes a discussion of an important commonality, as well as some noteworthy differences. The analysis of differences between theories also sets the stage for the explanations to be evaluated individually. Each explanation is likely to have its domains of relevance, that is, each explanation is more likely to apply under certain conditions than others. Highlighting differences between explanations helps to specify boundary conditions of the various explanations. Possible boundary conditions of a given explanation are illustrated on logical grounds, as well as through a discussion of empirical findings that are not easily accounted for by the explanation.

Specifying Similarities: A Sense-Making Analysis

An assumption underlying all of the explanations is that people strive to make sense of their environments to regulate their behavior. Behavioral self-regulation is threatened by events that are perceived to be (a) unexpected, (b) negative, or (c) both. It is not surprising, therefore, that people are especially likely to seek sense-making information in response to events viewed as unexpected, negative, or both. For example, research on attributional instigation—the study of when people ask why—has shown that people seek to determine the causes of their own and others' behavior when the behavior in question is unexpected, associated with negative outcomes, or both (Pyszczynski & Greenberg, 1981; Wong & Weiner, 1981).

In general, people expect and want procedures to be fair; moreover, they expect and want their outcomes to be favorable. As a result, they should initiate sense-making or information-seeking activity when procedures are unfair, outcomes are unfavorable, or both. When people are in a sense-making mode, external cues that address their informational needs should be particularly influential. Thus, when procedures are unfair, the degree of outcome favorability may have high informational value. For example, unfair procedures may lead people to believe that the receipt of favorable outcomes in the future is not ensured, thereby heightening the effect of the current outcome on their reactions to a decision. Similarly, when current outcomes are unfavorable, the level of procedural fairness should

be highly informative. For example, unfavorable outcomes may lead people to scrutinize the procedures that gave rise to those outcomes, thereby increasing the effect of procedural fairness on their reactions to the decision.

Much psychological theory and research support the assumptions of the sense-making analysis of the interaction between procedures and outcomes: Unfair procedures and unfavorable outcomes are experienced as both negative and unexpected. First, consider the notion that unfair procedures are experienced negatively. According to the self-interest model (Thibaut & Walker, 1975), people believe that they will receive less favorable outcomes—in both the short and long term—when procedures are unfair. Group value theory (Lind & Tyler, 1988) suggests that people suffer self-esteem loss or self-identity confusion when procedures are unfair. Second, there are reasons to believe that unfair procedures are unexpected. Societal norms usually prescribe that decision procedures should be structured fairly, for example, people should be allowed to provide input into decisions that affect them, decision procedures should be applied consistently, and so forth. In addition, social norms mandate that those implementing a decision should treat the affected parties with "interactional justice." For example, for decision implementers to provide an explanation of their decisions, to treat the affected parties with dignity and respect, or both are usually considered common courtesies. As a result of social norms dictating procedural justice, people may define procedural justice as an "inalienable right" that they have come to expect.

Furthermore, unfavorable outcomes are perceived to be negative and unexpected. For example, a basic tenet of equity theory is that people react adversely to inequitable outcomes (e.g., Walster et al., 1978). The notion that unfavorable outcomes are generally unexpected also has much empirical backing. For example, just world theory (Rubin & Peplau, 1975) posits that people expect that they will "get what they deserve and deserve what they get." In addition, the respective literatures on positive illusions (S. E. Taylor & Brown, 1988), on overconfidence bias (Tversky & Kahneman, 1974), and on optimism concerning life events (Weinstein, 1980) suggest that people usually expect their outcomes to be favorable—far more than they ought to.

To recap the sense-making analysis of the interactive relationship: Events experienced as unexpected, negative, or both prompt information search, which heightens individuals' susceptibility to influence by salient external cues. The unexpected and negative nature of unfair procedures increases peoples' receptivity to outcome information. Similarly, the unexpected and negative nature of unfavorable outcomes enhances individuals' susceptibility to influence by procedural information.[6]

Delineating Differences

Although all four explanations of the interaction effect generally reflect individuals' sense-making concerns, there are some important differences between them. In fact, the explanations differ from each other in at least three ways. One distinguishing dimension is the underlying nature of the goals that individuals try to achieve. According to some explanations, individuals' goals are primarily economic or material. Other explanations suggest that peoples' goals include noneconomic factors (instead of or in addition to economic considerations). For example, the self-interest explanation is predicated on the assumption that people seek to maximize their personal gain from exchange relationships, not only in the short run but also over the longer haul. Fair procedures are preferred, therefore, because with them "it is reasonable to expect long-term gains even in the absence of short-term gains" (Lind & Tyler, 1988, p. 224). In contrast, both group value theory (Lind & Tyler, 1988) and the updated version of RCT (Folger, 1993) assume that people are concerned not only with maximizing their tangible benefits but also with fulfilling their psychological needs, such as desires for esteem, identity, and control. Thus, procedural fairness may also be preferred because it is much more likely than procedural unfairness to lead to the satisfaction of individuals' psychological needs.

A second distinction between the various explanations is the temporal nature of the outcomes that influence individuals' reactions. According to some explanations, people respond primarily to the present outcomes they receive. According to other explanations, individuals' beliefs about two outcomes are relevant: present outcomes (that were recently received) and future outcomes (which may or may not be received). For example, outcome attribution theory suggests that the sense-making process is initiated in response to current outcomes. Particularly, when current outcomes are unfavorable, people seek to explain why they occurred, what they imply, or both. In contrast, self-interest theory views people as concerned with not only their current outcomes but also with their expected future outcomes, and in particular, with the relative importance attached to each.

A third way to distinguish between explanations is whether the processes associated with each are initiated by outcome or procedural information. For example, outcome information provides the trigger according to outcome attribution theory. Thus, in trying to determine why they received certain outcomes (particularly unfavorable ones), people examine and,

[6] Sense making is a means toward self-regulation, in which individuals strive to attain their material and psychological goals. Thus, in the face of unfavorable outcomes, procedural information is seen as having important self-regulatory implications, thereby heightening individuals' susceptibility to be influenced by procedural information. Moreover, on encountering a lack of procedural fairness, people should find outcome information to have important implications for self-regulation, thereby increasing the effect of outcome information. This is not to suggest, however, that a negative experience in one domain (procedural or outcome) directs attention *only* to information in the other domain. Given the self-regulatory motivations underlying individuals' sense-making activities, procedural unfairness is likely to lead people to focus on information other than the degree of outcome favorability, and unfavorable outcomes should lead people to attend to information other than the level of procedural justice. For example, if individuals experience a lack of outcome favorability in one area of an exchange relationship, they may start to pay greater attention to (and therefore be more affected by) other outcomes associated with the exchange relationship. Because the purpose of this article is to explore the interaction between procedures and outcomes, the sense-making analysis pertained only to those notions which could help account for the interaction. In actuality, people have a variety of sense-making questions in response to a lack of procedural fairness, outcome favorability, or both. Consequently, procedural justice should interact with other factors that address individuals' informational needs (besides outcomes), and outcomes should interact with other factors that address their informational needs (besides procedural justice).

therefore, are affected by the level of procedural fairness accompanying their outcomes.

In contrast, according to group value theory, the triggering information is more procedural. Group value theory suggests that individuals' perceptions of procedural fairness determine whether they define the exchange relationship as more relational versus transactional. The more procedures are perceived as fair, the more likely the relationship is defined as relational; therefore, the less likely people are affected by the perceived favorability of their current outcomes.

Van den Bos et al. (1995) suggested that whether individuals' initial focus is on procedural or outcome information is a meaningful distinction, even though each type of focus can elicit the interactive relationship between outcome favorability and procedural justice. In several studies, van den Bos et al. orthogonally manipulated procedural and outcome factors. However, for half of the participants, the procedural fairness manipulation preceded the outcome manipulation. The order of the manipulations was reversed for the other half of the participants. In all likelihood, individuals initially focused on the information—procedural or distributive—that was presented to them first.

Both studies generally revealed the typical interaction between procedural justice and outcome favorability, regardless of the order in which the two variables were manipulated. There were, however, subtle differences in the form of the interaction effect as a function of the order in which the procedure and outcome variables were manipulated; such differences suggest that the variation in the order in which the two variables were manipulated elicited different psychological substrates of the interaction effect. More specifically, the manipulation presented first had more of an effect than the one that appeared second. For example, when procedural information was varied first, it had (a) a very sizable effect on a variety of dependent variables in the unfavorable outcome condition and (b) a considerably smaller, but still significant effect in the favorable outcome condition. When procedural information was presented second, it had (a) a significant effect in the unfavorable outcome condition (though not as large as the effect found in the unfavorable outcome condition when procedural information came first) and (b) no effect in the favorable outcome condition. In summary, although the interaction effect was significant regardless of the order of the two experimental manipulations, the effect was probably mediated by different processes when procedural fairness was first introduced relative to when outcome favorability was first manipulated.

Boundary Conditions

The preceding analysis does more than help clarify some of the conceptual distinctions between the various explanations. The delineation of differences provides one (but not the only) method of identifying some of the conditions under which each explanation is more versus less likely to account for the interaction effect. For example, an important assumption underlying the self-interest explanation as described above is that people will be affected by current *and* future outcomes provided by the other party of the exchange relationship. Many studies demonstrating the interaction effect, however, were conducted under laboratory conditions. In such settings, it is unlikely that future outcomes were meaningful to participants. Most psychological experiments are one-shot encounters in which long-term considerations are nonexistent. Therefore, the self-interest explanation seems less likely to account for the interaction effect exhibited by research participants who were studied outside of (rather than within) the context of an ongoing exchange relationship.

The appropriateness of group value theory in accounting for the interaction between procedural and distributive justice may depend on the degree of importance that people assign to the satisfaction of their economic needs. Assume that, for a variety of reasons, people vary in the extent to which they are concerned with fulfilling their economic needs. For instance, individuals whose basic economic needs have not been met may be particularly motivated to satisfy such needs. When the interaction effect is exhibited by people for whom economic outcomes are important, it may be best explained by self-interest theory (assuming that judgments of present *and* future outcomes enter into their reasoning). In contrast, individuals less concerned with satisfying economic needs may be more freed up to concern themselves with satisfying noneconomic needs, such as the desire for self-esteem. At the very least, group value theory seems better able to account for the interaction effect when it is exhibited by individuals who attach little, rather than a great deal of, importance to satisfying their economic outcomes.

Outcome attribution theory seems more relevant to situations in which individuals' initial focus is on outcome rather than procedural information. According to outcome attribution theory, the interaction effect emerges because people seek to explain the causes of their outcomes. However, if people initially attend to procedural information, then outcome attribution theory seems less likely to account for the interaction effect.

Finally, RCT (Folger, 1987, 1993) accounts for the interactive effect of distributive and procedural justice on individuals' feelings of resentment or anger toward the decision-making agent. Therefore, the nature of the dependent variable may represent a boundary condition of the theory's ability to account for the interaction effect. When the dependent variable reflects on the agent of the decision-making process (e.g., satisfaction with the manager) or the institution represented by the agent (e.g., organizational commitment), RCT provides a plausible explanation of the interaction effect. When the interaction effect emerges on dependent variables more removed from the agent's judgments, however, RCT seems less applicable. For example, the interaction effect was found in a host of studies which included participants' perceptions of the decision outcome. More specifically, the perceived level of the distributive justice of the decision served as the dependent variable in some studies (Daly, 1994; Gilliland, 1994; Gilliland & Beckstein, 1995; Greenberg, 1987), whereas participants' satisfaction with the outcome of the decision was the dependent measure in another study (LaTour, 1978). RCT may have difficulty accounting for these findings, unless one were to assume that individuals' feelings toward the agent of the decision process somehow "spilled over" to affect their reactions to the outcome itself.[7]

[7] For example, spillover could occur if people were forced to evaluate the decision outcome but were not given the opportunity to judge the agent of the decision process. In such an instance, individuals may feel that outcome dissatisfaction is the best (or only) way to indicate resentment toward the agent.

In summary, the interaction between procedural fairness and outcome favorability is a highly robust finding. However, relatively few studies have provided converging evidence that a particular explanation provides a reasonable account of the interaction effect in a given instance, and even fewer researchers have empirically evaluated the conditions under which each explanation is more versus less likely to account for the interaction effect. Thus, in the future researchers need to (a) evaluate whether a particular explanation accounts for the interaction effect and (b) determine the boundary conditions (or domains of relevance) for each of the explanations.

Additional Future Research Directions

The interactive relationship between procedural fairness and outcome favorability may also be elucidated by researchers in the future who evaluate the conditions under which the interaction is particularly pronounced, nonexistent, or even reversed. Consider the results of four independent samples (Gilliland, 1994; Schroth & Shah, 1993) in which individuals' self-evaluations served as the dependent variable (with the use of such measures as Heatherton and Polivy's (1991) State Self-Esteem Scale). Contrary to the typical interaction results depicted in Figure 1, outcome favorability was found in these studies to have had more of an effect when procedural justice was relatively high. Thus, in one experiment (Schroth & Shah, 1993), participants received either positive or negative outcome feedback about their performance on an exam measuring their managerial potential. Furthermore, one group was told that the procedures used to determine their performance were fair, whereas a second group was informed that the procedures were unfair. Dependent variables included perceptions of procedural and distributive justice, as well as a measure of individuals' state self-esteem. The usual interaction effect emerged on the two justice measures: Participants perceived fairness to be higher when their performance feedback was positive rather than negative, particularly when manipulated procedural fairness was relatively low. The measure of state self-esteem also yielded an interaction effect, the nature of which was quite different. Whereas people had higher state self-esteem when their performance feedback was positive rather than negative, this tendency was much more pronounced when manipulated procedural fairness was relatively high.

Schroth and Shah (1993) speculated that attribution processes may have accounted for the results on the self-evaluation measure. Assume that people generally feel better about themselves when their outcomes are relatively positive. Extending this basic finding, attribution theorists have shown that the effect of outcome valence on self-evaluations depends on the causal attributions that people make for their outcomes. Internal or self-relevant outcome attributions magnify the effect of outcome favorability on individuals' self-evaluations (Weiner, 1974). That is, people feel better (worse) about themselves when positive (negative) outcomes are attributed internally rather than externally.

Level of procedural justice, in turn, may have influenced individuals' outcome attributions in Schroth and Shah's (1993) research. When outcomes were perceived to be the result of unfair procedures, participants may have made more external outcome attributions; they probably were relatively unlikely to have seen themselves as having caused or deserving of outcomes attributable to unfair procedures. In response to fair procedures, however, outcomes may have been seen as more deserved and hence more attributed to internal factors.

In summary, research has shown that (a) procedural and outcome factors interact to influence individuals' self-evaluations, such that outcome favorability is more strongly related to self-evaluations when procedures are relatively fair, and (b) the effect of outcome favorability on self-evaluations is moderated by the internality of the attributions that people make for their outcomes. More speculatively, there is reason to believe that procedural fairness is positively related to the internality of individuals' outcome attributions, but this conjecture needs to be evaluated in future research.

The nature of the interaction effect on measures of self-evaluation is quite different from the pattern observed on other dependent variables (see Figure 1 and Table 1). However, the psychological process driving the results on the self-evaluation measures may be at least somewhat similar to the outcome attribution explanation described above. According to the outcome attribution explanation, people seek to understand the determinants of their outcomes, particularly when their outcomes are perceived as unfavorable. To understand the basis of their outcomes, they are likely to focus on the procedures that gave rise to their outcomes. Given that their focus has been on procedural information, it stands to reason that perceptions of procedural fairness are positively related to individuals' evaluations of the "system," that is, the decision-making process, the decision makers, or both particularly when outcomes are unfavorable.

In our analysis of the determinants of self-evaluations, however, we speculated that people evaluate the extent to which they feel personally responsible for their outcomes; the more personally responsible they feel, the greater the effect of outcome valence on their self-evaluations. The perceived level of procedural fairness, in turn, was hypothesized to determine the internality of individuals' outcome attributions. Thus, although the nature of the interaction effect is quite different, depending on whether the target of evaluation is the system or the self, the underlying psychological process may not be nearly as different. Both sets of findings may reflect individuals' attempts to understand the causes of their outcomes.

Two additional factors that may have a moderating influence on the interaction between procedural fairness and outcome favorability include (a) the degree to which unfair procedures and unfavorable outcomes are unexpected, negative, or both and (b) differences between the various procedural justice elements.

Unexpectedness and Negativity of Unfairness

Although different psychological processes may account for the focal interaction effect, we speculate that all are reflective of sense-making activity elicited by the negativity or unexpectedness of unfair procedures, unfavorable outcomes, or both. This reasoning suggests that when low procedural fairness and low outcome favorability are less negative or less unexpected, the focal interaction should be less likely to occur. In general, unfair

procedures and unfavorable outcomes should be experienced as negative events. The extent to which unfair procedures and unfavorable outcomes are unexpected, however, may be more variable. For example, individual differences in self-esteem (Brockner, 1988), self-efficacy (Bandura, 1977), outcome optimism (Scheier & Carver, 1985), and belief in a just world (Lerner & Lerner, 1981; Rubin & Peplau, 1975) could influence the extent to which people expect their outcomes to be unfavorable. Furthermore, people who regularly experience societal injustices may form pessimistic expectations of their outcomes. According to the sense-making explanation of the interaction effect, people who expect low outcome favorability should be less likely to exhibit the focal interaction effect.

Furthermore, how individuals experience the procedures associated with a current decision may depend on the procedures used in previous decisions. For example, employees of organizations known to be procedurally unfair should not be very surprised if the institution handles a current decision in an unfair way. If so, the interaction effect should be considerably less pronounced, relative to what would be observed in an organization whose employees expect procedural justice.

Procedural Justice Variables

The significance and form of the interaction effect may depend on the nature of the procedural justice factor under consideration. One dimension to emerge recently in the justice literature is whether the procedural factor refers to the nature of the decision structure (e.g., process and decision control, as discussed by Thibaut & Walker, 1975) or the interpersonal behavior of the parties responsible for implementing the decision (e.g., providing explanations and treating people with dignity and respect; Tyler & Bies, 1990). There is a clear conceptual distinction between the structural versus interpersonal aspects of procedural justice. Left unspecified to date—and hence a mandate for future research—is how the differences between these aspects relate to the psychological processes that mediate the focal interaction effect.

One sense-making activity prompted by the receipt of an unfavorable outcome is to determine the cause of the outcome. To identify the cause(s) of an outcome, we suggested earlier that people examine procedural information. Folger (1993) in his revised version of RCT points out, however, that procedural elements differ in how much they are perceived to have caused outcomes. For example, process control and decision control are likely seen as having influenced the outcome. Other procedural factors are much less apt to be seen as having an impact on the decision. For example, interactional justice facets—such as whether those affected by the decision were treated with dignity and respect by the implementers of the decision—often emerge *after* the decision was made; it is unlikely, therefore, that postdecisional interactional justice is seen as having a causal effect on the outcomes associated with the decision.

The extent to which procedures are perceived to have had a causal effect on outcomes may be important for at least two reasons. First, if the typical interaction between procedural fairness and outcome favorability emerges when the procedural factor is unlikely to be perceived as having caused the outcome, then an (outcome) attributional explanation of the interaction becomes less plausible. For example, several studies have shown that outcome favorability interacted with the extent to which the decision implementers treated the affected parties with respect; consistent with the usual interaction pattern, the affected parties responded much more negatively when outcome favorability was relatively low *and* when they were not treated respectfully (Greenberg, 1993, 1994).

Second, the perceived effect of procedure on outcome also has implications for findings that outcome favorability influenced individuals' self-evaluations more when procedures were fair than unfair (Gilliland, 1994; Schroth & Shah, 1993). Schroth and Shah suggested that their findings were based on individuals' tendencies to attribute their outcomes to the procedures. Of course, an attributional analysis of these findings is predicated on the assumption that procedural fairness was perceived to have had a causal impact on the outcomes. In other words, had Schroth and Shah used facets of procedural justice that were less likely seen as having caused the outcomes—such as the social sensitivity factors used by Greenberg (1993, 1994)—they might have found different results.

Practical Implications

For Resource Allocators

Decision makers who wish to gain support for their allocation behavior need to (and perhaps may) recognize that when outcome favorability is high, the effects of procedural justice are reduced. Furthermore, and perhaps less obvious, when procedures are fair, the effects of outcome favorability are relatively small. At first blush, it may appear that procedural justice and outcome favorability are functionally equivalent because when either factor is high, the impact of the other is reduced. There are, however, important differences in the costs associated with behaving in procedurally fair versus distributively favorable ways. When decision makers wish to allocate outcomes favorably, the economic costs may be considerable. For example, downsizing organizations may spend a great deal of money to provide severance pay, outplacement counseling, continuation of health insurance, and other benefits to the people whose jobs are eliminated. In sharp contrast, the economic costs of procedural justice often are considerably smaller. For example, procedural justice in a downsizing organization may include providing ample advanced notice about the impending layoffs, offering clear and adequate explanations of the reasons for the layoffs, allowing people to participate in decisions wherever appropriate, and implementing the layoffs in a socially sensitive fashion. In short, procedural justice may provide a cost-effective way of implementing unpopular resource allocation decisions.

Folger (1992) reported an amusing anecdote involving Winston Churchill, who recognized the cost effectiveness of procedural justice. Apparently, Churchill was most respectful when sending Britain's declaration of war letter to the leadership of Japan in World War 2. For example, Churchill exhibited interactional fairness by signing before his name, "your obedient servant." He was publicly castigated by his countrymen, however, for being so polite in the context of declaring war. To which Churchill responded, "when you have to kill a man, it costs nothing to be polite" (Folger, 1992, p. 11).

Unlike Winston Churchill, however, most decision makers act as if procedural fairness is quite costly, although the costs

may not be economic. Folger (1992) similarly wondered why so many organizational decisions are not procedurally fair, given that procedural fairness provides a cost-effective way to make difficult resource allocation decisions.

Folger (1992) speculated that the barriers to procedural fairness in organizational decision making may be legal, psychological, or both. In an organizational context, procedural fairness often entails providing information and emotional support to the parties affected by the decision. The implementers of certain decisions may withhold information for fear of it being used against the organization in court. Moreover, procedural justice is likely to reduce the psychological distance between the implementers and the recipients of a resource allocation decision. Implementers, however, may wish to maintain distance. By keeping their distance, they may minimize feelings of guilt associated with doing bad things to good people; psychological distance enables implementers to believe that perhaps the recipients were not such good people after all. Furthermore, in maintaining the distance between themselves and the recipients, they may be able to reduce the anxiety that they may experience a similar fate some day. Thus, whereas the economic costs of procedural justice may be small (relative to the costs associated with outcome favorability), the psychological challenge for implementers is considerable. Future research should be directed toward helping managers overcome the barriers to implementing decisions in procedurally fair ways.

Resource allocators will forever grapple with how to make decisions that will inevitably be seen as unpopular—that is, viewed as distributively unfavorable—by significant numbers of people. Although the present review of studies suggests that procedural justice offers a cost-effective solution to many resource allocation dilemmas, the nature of the interaction raises a host of practical and ethical dilemmas. The present findings suggest that if unpopular decisions have to be made, it is critical for them to be made in procedurally fair ways. The present findings do not address, of course, the matter of whether unpopular decisions should be made at all. Moreover, they do not specify how distributively unfavorable these choices should be. The studies reviewed here consistently have shown that level of procedural justice had a greater effect when outcome favorability was relatively low. It is entirely possible, however, that when outcome favorability is low in an absolute sense, procedural justice will have little buffering effect. For example, the productivity and morale of employees who survived a layoff would still be expected to plummet if the downsizing organization acted in procedurally fair ways but provided little or no concrete support—for example, severance pay and outplacement counseling—to the employees who had been laid off.

Even more pernicious could be the deliberate misuse of procedural fairness as a decision-making strategy. For example, it is possible to misinterpret the present findings to suggest that outcome favorability is inconsequential as long as the implementer is perceived as procedurally fair. Such an interpretation is incorrect on two counts. First, the presence of procedural justice reduces (but usually does not eliminate) the effect of outcome favorability. Second, although procedure and outcome factors are conceptually distinct, they also relate to each other. That is, implementers who show a lack of concern for the distributive favorability of their decisions will probably find it more difficult to be seen as procedurally fair.

For Scholars of Exchange Relationships

Finally, the emergence of the interaction effect has implications for the relationship between scholars who differ in their approach to the study of exchange relationships. Some have been primarily concerned with the effects of outcomes, whereas others have been mainly interested in the effects of procedural fairness. We believe that artificial (and often stifling) barriers exist between these two groups of scholars. The widespread presence of the interaction effect, however, may spark a productive dialogue between these two groups. That is, outcome-oriented theorists will have to acknowledge that the effect of their favored variables depend on procedural variables, and procedurally oriented theorists will have to acknowledge that the effect of their favored factors depend on outcome considerations. So, for example, rather than treating outcomes as a "nuisance" variable to control for, procedural theorists should come to view outcomes as a moderator of the effect of procedural fairness. In short, by calling attention to the robust interaction between procedural fairness and outcome favorability, we hope to stimulate an ongoing, healthy dialogue between scholars with diverse views.

Conclusion

The initial waves of inquiry into exchange relationships—in which researchers examined the independent effects of outcome and procedural factors—supported the conventional wisdom that "it is not only what you do, but how you do it." The most recent wave of research—focusing on the interactive relationship—suggests that the conventional wisdom needs to be revised as follows: The effects of what you do depend on how you do it.

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