Is it pay levels or pay raises that matter to fairness and turnover?

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Summary
Two studies examined the relationship between actual pay and distributive and procedural justice, and the extent to which these perceptions were related to two important pay satisfaction dimensions, pay level and pay raise, and ultimately, impacted turnover. For each study the measures of pay and justice variables were obtained on a cross-sectional basis, while the measure of turnover was necessarily lagged. Results showed that distributive justice mediated the relationship between pay and both pay level satisfaction and pay raise satisfaction. Furthermore, distributive justice was a stronger predictor of pay level satisfaction; whereas procedural justice was a stronger predictor of pay raise satisfaction. Procedural justice also played a moderating role in Study 2. The study also showed that only pay raise satisfaction was significantly and negatively related to turnover in Study 1, and to turnover via turnover intention in Study 2. Results support the value of considering pay satisfaction as multidimensional when evaluating justice issues in a compensation context. Copyright © 2005 John Wiley & Sons, Ltd.

Introduction
Organizations provide various forms of rewards to employees in exchange for their contribution to the goals of the organization. Of the different types of rewards availed by organizations, monetary pay is a ubiquitous and critically important factor (Bartol & Locke, 2000; Graham & Welbourne, 1999; Lawler, 1971, 1990, 2000; Milkovich & Newman, 2004). Pay can function not only as a motivator (Gardner, Van Dyne, & Pierce, 2004), but also as a means of encouraging employee retention (Lum, Kervin, Clark, Reid, & Sirola, 1998). However, as pointed out by Adams (1963) in developing equity theory, the distribution of monetary rewards can introduce inequity issues that undermine the potential positive impacts of pay and lead to negative outcomes. In fact, research suggests that a majority of employees feel their employers compensate them unfairly, leading Heneman and Judge (2000) to conclude that there is a critical need for greater understanding of fairness issues as they apply to pay allocations in organizations.

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In considering pay issues, two types of fairness are particularly relevant—distributive justice and procedural justice. While distributive justice refers to the degree to which employees perceive their pay amount as fair, procedural justice is concerned with the perceived fairness of the means or methods used to determine the amount of pay. Unfortunately, research efforts to date have produced mixed results with respect to the role of these two types of justice and their impacts on pay satisfaction and, ultimately, turnover (Bergmann & Scarpello, 2001; Gerhart & Rynes, 2003; Heneman & Judge, 2000). Support for interaction effects involving distributive and procedural justice has also varied (McFarlin & Sweeney, 1992).

Recently, several researchers have suggested that building effectively on past pay and fairness research requires consideration that pay satisfaction is actually multidimensional. For example, Heneman and Judge (2000) argue that using only the pay level satisfaction dimension or a global pay measure may mask the underlying dynamics with respect to the impact of distributive and procedural justice on pay satisfaction. Miceli and Mulvey (2000), too, have called attention to the fact that most justice related studies have focused on pay level satisfaction despite considerable evidence that pay satisfaction is multidimensional (e.g., Heneman & Schwab, 1985; Judge, 1993; Judge & Welbourne, 1994; Miceli & Lane, 1991). Along similar lines, Tremblay, Sire, and Balkin (2000) have argued for the need to consider pay satisfaction dimensions when assessing how distributive and procedural justice might influence pay satisfaction. Because our interest is in rewards for organizational contributions, we chose to focus on the pay level and pay raise dimensions of pay satisfaction, factors which are fundamental to most compensation systems. Thus, one purpose of the present study is to assess the potential differential impacts of distributive and procedural justice on two critical pay satisfaction dimensions, pay level and pay raise. Our contribution is to link justice theory with a more sophisticated delineation of pay satisfaction theory that recognizes pay satisfaction as multidimensional, rather than global or unidimensional.

At the same time, it is possible that the pay satisfaction dimensions themselves may have separate effects on critical organizational variables, such as actual turnover (Heneman, 1985). As Miceli and Mulvey (2000) have argued, if distinguishing among pay dimensions is important, more research should be devoted to determining if they make meaningful and separate contributions to outcomes of interest. Yet, relatively few studies have attempted to connect pay satisfaction and subsequent actual turnover, much less considered the pay dimensions issue (Summers & Hendrix, 1991). To our knowledge, no research has examined the possibility of separate impacts of pay level and pay raise on turnover intentions and actual turnover within a framework that includes justice considerations. Instead, the available research has tended to focus on the impact of distributive and procedural justice on global pay satisfaction (e.g., Sweeney & McFarlin, 1993), pay level satisfaction (McFarlin & Sweeney, 1992), or pay raise satisfaction (e.g., Folger & Konovsky, 1989) separately. This situation has precluded the simultaneous consideration of the influence of distributive and procedural justice perceptions on pay satisfaction dimensions, such as pay level satisfaction and pay raise satisfaction, and the subsequent impacts of these separate pay satisfaction dimensions on turnover intentions and, ultimately, turnover itself. Moreover, Gerhart and Rynes (2003) have theorized that pay raise satisfaction may be more salient than pay level satisfaction for employees already in organizations, but research has not address this question, particularly with respect to an important outcome such as turnover. Thus, a second purpose of our research is to uniquely examine, within a justice framework, the degree to which pay level satisfaction and pay raise satisfaction have separate associations with employee turnover intention and actual turnover. Our contribution is to begin to more adequately integrate justice theory with multidimensional pay satisfaction theory in predicting an outcome of high interest to organizations, turnover.

To achieve our research purposes, we conducted two cross-sectional field studies with a lagged measure of turnover. We first examined the proposed model within a single organization, and then
replicated the study among a sample of participants from a variety of organizations. Thus, our third contribution is to demonstrate the robustness of our theoretical frame. Our research also has practical implications for organizations because it aids their efforts to foster pay satisfaction, which, in turn, facilitates retaining those employees the organization considers to be good performers or wishes to retain for other reasons (e.g., Bartol & Martin, 1990).

Hypotheses Development

Mediating effects of distributive justice

As equity theory (Adams, 1963, 1965) posits, employees compare their investments and outcomes to those of relevant others inside and outside their organization. Based on such judgments, employees who perceive their reward amounts to be inequitable are apt to be less satisfied (Greenberg, 1982; Lawler, 1971; Livingstone, Roberts, & Chonko, 1995). Borrowing from Locke’s (1976, p. 1304) widely cited definition of job satisfaction, we consider pay satisfaction to be ‘a pleasurable or positive emotional state resulting from the appraisal’ of one’s pay situation. Thus, it includes both an affective and a cognitive component (Brief, 1998). As equity theory suggests, the impact of a given pay allocation is likely to depend not only on the appraisal of the amount received, but also on the extent to which the pay distribution is judged to be fair or equitable (Gerhart & Rynes, 2003; Lum, Kervin, Clark, Reid, & Sirola, 1998; Weiner, 1980).

Considerable empirical research supports the notion that distributive justice judgment, which address the perceived fairness of the outcomes associated with allocation decisions, is a significant predictor of pay level satisfaction (e.g., Aquino, Griffeth, Allen, & Hom, 1997; DeConick & Stilwell, 2004; Porter & Steers, 1973; Summers & Hendrix, 1991; Sweeney, 1990; Sweeney & McFarlin, 1993). However, many studies involving pay satisfaction have focused on global measures that have been construed to refer mainly to pay level, although some have addressed the pay level dimension specifically (Heneman & Judge, 2000; Heneman & Schwab, 1985). At the same time, only limited research has investigated perceptions of distributed justice as they relate to another key dimension of pay satisfaction, namely pay raise satisfaction (Folger & Konovsky, 1989). Although there is some evidence that distributive justice impacts both pay level satisfaction (e.g., McFarlin & Sweeney, 1992; Sweeney & McFarlin, 1993) and pay raise satisfaction (e.g., Folger & Konovsky, 1989), Miceli and Mulvey (2000) argue that distributive justice is likely to be more strongly related to the pay level dimension than to other dimensions, such as pay raise satisfaction, that encompass greater focus on the allocation system itself (Heneman, 1985). Thus, because of its heavy focus on overall outcomes, it is likely that distributive justice will be particularly strongly related to pay level satisfaction. Based on this logic and previous research linking pay level satisfaction to distributive justice (e.g., McFarlin & Sweeney, 1992), we hypothesize the following (see Figure 1):

Hypothesis 1: Perceptions of distributive justice will positively influence (a) pay level satisfaction and (b) pay raise satisfaction, (c) with the influence being stronger in the former case.

Sweeney (1990) also found that distributive justice mediated the relationship between pay and pay level satisfaction. However, existing studies have not examined the mediating role of distributive justice with respect to pay raise satisfaction. Building on Sweeney’s findings, there is research indicating the presence of a positive association between actual pay amount and distributive justice
(e.g., Summers & Hendrix, 1991; see also Gerhart & Rynes, 2003). There also are findings linking distributive justice to pay raise satisfaction (Folger & Konovsky, 1989) and to pay level satisfaction (McFarlin & Sweeney, 1992). Given that distributive justice encompasses the notion of the fairness of allocations, we believe that distributive justice will have a mediating role between pay amount and both pay satisfaction dimensions. Accordingly, we hypothesize the following (see Figure 1):

**Hypothesis 2a:** There will be a positive relationship between pay amount and distributive justice.

**Hypothesis 2b:** Perceptions of distributive justice will mediate the relationship between pay amount and both (i) pay level satisfaction and (ii) pay raise satisfaction.

**Role of procedural justice**

While distributive justice is concerned with the fairness of the amount of resources distributed, procedural justice focuses on the fairness of the rules and processes governing how such decisions are made (Greenberg & Folger, 1983). Essentially, two different arguments exist regarding the role of procedural justice in influencing pay satisfaction. One view posits a direct effect, whereas the other argues for an interaction between distributive justice and procedural justice.

With respect to the direct effect, some researchers suggest that procedural justice operates by directly influencing pay reactions. For example, in Hom and Griffeth’s (1995) turnover model, both perceived fairness of pay procedures and perceived fairness of pay amounts were proposed as predictors of satisfaction with pay. In support of this proposition, Welbourne (1998) concluded that both distributive and procedural fairness affected gainsharing satisfaction. Other research also generally supports a relationship between procedural justice and pay satisfaction, with procedural justice often explaining less variance in pay satisfaction than distributive justice (e.g., Konovsky, Folger, & Cropanzano, 1987; Miceli, Jung, Near, & Greenberger, 1991; McFarlin & Sweeney, 1992; Sweeney & McFarlin, 1993; Tang & Sarfield-Baldwin, 1996). However, while most studies focus on global or pay level satisfaction (e.g., McFarlin & Sweeney, 1992), extant research has not paid enough attention to the distinction between pay raise satisfaction and pay level satisfaction. In fact, some research has combined the two dimensions (e.g., Scarpello & Jones, 1996). On the other hand, Folger and Konovsky’s (1989) study suggested that both distributive justice and procedural justice account for unique variance in predicting pay raise satisfaction. This seems reasonable in view of the fact that pay raises tend to be awarded periodically, often in conjunction with performance appraisals, and there tends to be some managerial discretion regarding pay raise adjustments. In contrast, pay level is largely
determined at organizational entry and is subsequently altered mainly through pay raise mechanisms (Milkovich & Newman, 2004). In fact, Gerhart and Rynes (2003) speculate that once an individual has joined an organization, pay raise satisfaction may emerge as more salient than pay level satisfaction. Therefore, in line with this reasoning and Heneman’s (1985) arguments that the pay raise dimension also encompasses some consideration by recipients of the allocation process involved, we expect that procedural justice will have a stronger impact on pay raise satisfaction than on pay level satisfaction (Miceli & Mulvey, 2000). Thus we offer the following hypothesis (See Figure 1):

**Hypothesis 3:** Perceptions of procedural justice will directly and positively influence both (a) pay level satisfaction and (b) pay raise satisfaction, (c) with the influence being stronger in the latter case.

At the same time, we do not posit a mediation effect for procedural justice on the relationships between pay amount and the pay satisfaction dimensions because judgments regarding procedural issues should be somewhat independent of allocations themselves (Heneman & Judge, 2000).

On the other hand, considerable evidence supports the possibility that distributive justice and procedural justice may interact to influence affective reactions (Brockner & Wiesenfeld, 1996). For instance, Folger and colleagues found evidence supporting the idea that fair procedures might minimize the dissatisfaction resulting from poor outcomes (Folger, Rosenfield, Grove, & Corkran, 1979; Greenberg & Folger, 1983). Similarly, Greenberg (1993) and McFarlin and Sweeney (1992) indicated that high procedural justice weakened the impact of distributive justice perceptions on employee behaviors and attitudes at work. Although compensation issues were not the focus, Brockner and Wiesenfeld’s (1996) review of results relating to 45 different samples provided considerable support for the notion that procedural justice is likely to have a greater influence on employee reactions when assessments of distributive justice are low, operating to assuage the negative impact of the low outcome.

Recently, however, Lind (2001) has suggested that the interaction effect of procedural and distributive justice posited by Brockner and Wiesenfeld (1996) was applied too broadly, a stance Brockner (2002) has affirmed. For example, fairness heuristic theory (Van den Bos, Lind, Vermunt, & Wilke, 1997) argues that such interactions are likely to occur under conditions in which individuals have information only about their own outcomes, but not those of others. In such cases, the fairness of the procedures may be more likely to be used as a ‘heuristic’ in making fairness judgments that influence affective reactions. In this sense, individuals use their available justice information to ‘fill in the blank’ (Lind, 2001, p. 74). Thus a ‘fair process effect’ can occur in which individuals use positive information and perceptions about the process to enhance judgments of the fairness of the distribution in the absence of comparison information about the distribution (Greenberg & Folger, 1983, p. 176). When comparison information regarding distributions is available, however, that information can be used directly without the need to substitute process fairness perceptions.

Pay raise situations are somewhat mixed in terms of available information. While individuals typically do not have information about the specific pay raises of others, they often are privy to related information, such as average pay raises, the range of percentage pay increases, or percentage increases allocated for different levels of performance (Heneman, 1992; Milkovich & Newman, 2004; Mohrman, Resnick-West, & Lawler, 1989). They can use this information in making at least some assessment of their outcome situation. In addition, they also have information regarding their own previous pay raises, which may be used to benchmark the present one (Bartol & Martin, 1998; Goodman, 1974), although intrapersonal comparisons may constitute a weaker reference point than interpersonal comparisons (Van den Bos, Wilke, Lind, & Vermunt, 1998). Moreover, given that allocating pay raises is an ongoing activity for organizations, individuals are likely to have gained some knowledge, if not
experience, regarding the process. Thus, the situation seems to fall in between the lack of information regarding the outcomes of comparison others likely to trigger a potential fair process effect and the full knowledge of the outcomes of others likely to encourage the direct use of distributive fairness information—suggesting that at least some interaction effects are possible for pay raise satisfaction. Therefore, we offer the following hypothesis, which posits that the interaction effects will influence pay raise satisfaction (See Figure 1); but we expect the relationship to be relatively weak:

**Hypothesis 4**: Perceptions of procedural justice will moderate the relationship between distributive justice and pay raise satisfaction, such that the relationship between distributive justice and pay raise satisfaction is weakened under high procedural justice than under low procedural justice.

We note that we have not hypothesized a moderation effect for pay level satisfaction because we argue that the stronger procedural issues relate to pay raise satisfaction. Hence if there is a moderation impact related to the fair process effect, it is most likely to occur with respect to pay raise satisfaction.

**Pay satisfaction dimensions as antecedents of (intention to) turnover**

Most justice studies related to compensation have been conducted in laboratory settings (e.g., Folger et al., 1979; Greenberg, 1987, 1993) and, thus, have been unable to examine the influence of justice factors and compensation on an important organizational outcome, turnover. It appears likely that employees who are dissatisfied about their pay due to low distributive and procedural justice will subsequently have a higher tendency to leave the organization. For example, in a number of turnover models, pay satisfaction is proposed as a major factor affecting the desirability of leaving and subsequent turnover behavior (e.g., Hom & Griffeth, 1995; Mobley, Griffeth, Hand, & Meglino, 1979; Price, 1977). While a number of turnover-related studies have reported a negative relationship between pay satisfaction and turnover intention (e.g., Dailey & Kirk, 1992; Lum et al., 1998), fewer studies have empirically tested models linking pay satisfaction to actual turnover and results have been mixed (e.g., Motowidlo, 1983; Mobley, Horner, & Hollingsworth, 1978; Porter & Steers, 1973; Sager, Varadarajan, & Futrell, 1988; Weiner, 1980). In a meta-analysis, Griffeth, Hom, and Gaertner (2000) estimated the correlation between pay satisfaction and turnover as −0.07 (corrected), with considerable variance beyond statistical artifacts unaccounted for. Studies that have considered pay satisfaction and turnover within the context of justice issues are relatively rare (e.g., Summers & Hendrix, 1991) and none seems to have addressed the pay dimension issue and turnover within the nomological net of distributive and procedural justice considerations.

Moreover, for the most part, current research has neglected the effects of pay raise satisfaction on turnover. Yet employees are likely to be highly concerned about pay raises for several reasons. For one thing, there is the obvious reason—namely that more pay is usually better than less pay. For another, Hsee and Abelson (1991) have argued that in allocation situations, such as pay, individuals tend to be particularly concerned with velocity—the direction and rate of change—because they seek and monitor information about their progress. Although they did not address the pay raise satisfaction issue itself, Trevor, Gerhart, and Boudreau (1997) provide evidence that salary growth (i.e., the amount of raises) has a significant negative influence on turnover. Another reason why pay raise satisfaction is likely to be important is that pay increases convey at least some information about the current worth of the individual in the eyes of the organization (Mohrman et al., 1989). Fairness heuristic theory (Vanden Bos et al., 1997), for example, points to the importance of standing within the group as conveyed by a relevant authority. Pay raises potentially convey some information about standing. Along these
lines, empirically, Folger and Konovsky (1989) have found a significant link between pay raise satisfaction and organizational commitment, a common negative antecedent of turnover. While none of the existing studies that we are aware of seems to have directly examined the effect of pay raise satisfaction on turnover, based on issues of velocity and standing as well as the prospect that both distributive and procedural justice influence pay raise satisfaction, it seems likely that pay raise satisfaction will account for additional variance in predicting turnover or turnover intention. Although available literature has tended to interchange global pay satisfaction and pay level satisfaction (Heneman & Judge, 2000) in assessing relationships with turnover, on balance it appears that pay level satisfaction will negatively influence turnover and turnover intention. We note, however, that the simultaneous effects of these two pay satisfaction dimensions on turnover and turnover intention have generally not been tested within a model that includes justice influences and allows the testing of simultaneous effects. Therefore, we propose the following (see Figure 1):

**Hypothesis 5:** (a) Pay level satisfaction and (b) pay raise satisfaction will directly and negatively influence turnover intention and/or turnover.

A theoretical model encompassing these hypothesized relationships is shown in Figure 1. To examine this model, we conducted two studies that we describe below.

## Organizational Context

### Study 1

*The Environment:* This study was conducted at a time when the economy was functioning very well and employment was high. Turnover rates in most organizations were relatively high compared to what they might be when the economy is recessionary. Commercial building was also flourishing, which particularly influenced prospects for business growth in this case, but also encouraged the emergence and growth of competitors, both large and small. The economy continued to do quite well for the duration of the study.

*The Timeframe:* The survey was conducted in Spring 1997.

*The Organization:* The privately-owned organization was a regional player in the services industry. It had been in business for a number of years. Due to the booming economy, the company was enjoying considerable growth aided by an upsurge in commercial building. Although the organization had a good reputation as an employer, the head of the human resources function and the CEO were particularly concerned about aggressive attempts by competitors, especially emergent ones, to poach managers, particularly through offers of increased pay. The pay system was similar to that of many organizations, such that it was heavily salary based, with salary raises typically awarded annually and usually sooner in the case of new managers. These raises were awarded via supervisory recommendations, subject to approval by managers at higher levels in the hierarchy who engaged in some discussion of relative merits. Recommendations were made within increase guidelines provided by corporate management and were intended to be based on performance. The average pay raise figure was conveyed to managers for their use in the pay allocation process and was available to others for the asking. There were bonuses available that were not proportionately large, but reflected the success of the business in a given year.
Study 1

Study 1 was conducted in a single organization, which allowed us to evaluate the relationships under investigation while holding constant the organization and pay system.

Method

Participants and procedure

For Study 1, we surveyed 288 managers from the corporate office and branch offices of a professional and support services organization located in the mid-Atlantic and southeastern parts of the United States. The questions related to the study were embedded in a survey that also covered a limited number of working condition factors of specific interest to the company. Surveys were distributed by a human resource representative and returned directly to the researchers by mail. All respondents were assured confidentiality and could remain anonymous if they so wished. However, respondents were requested to provide their employee number so that it would be possible to allow matching their responses with organizational context variables and possible follow-up surveys.

Among the 249 who responded (86 per cent of the sample), 130 respondents (52 per cent) provided their employee number, which enabled us to obtain from company records both actual pay data and subsequent retention/turnover information for these respondents. Data for nine respondents were eliminated due to missing data on the survey, retirements, or involuntary terminations. Thus, our analyses focused on the remaining 121 respondents who identified themselves. Of these, 86 per cent were male; 18 per cent worked for the company for less than one year, 29 per cent had been with the company for 1–3 years, 24 per cent for 3–5 years, and 29 per cent for over 5 years. Although employees who did supply their company numbers did not differ in organizational tenure from those who failed to provide their company numbers, there was a tendency for the latter group to have somewhat more negative attitudes with respect to the four attitudinal variables under study. However, ANOVA results indicated a significant difference ($p < 0.05$) between the groups only for distributive justice.

Study 2

The Environment: The survey for this study was conducted at a point when the economy was quite strong and employment was still relatively high for the region in which the participants were located. There were, however, some signs that the economy might be headed for a slowdown, a situation that materialized over the next two years. The region tends to fairly resilient even in recessionary economies because of relatively stable employment in some sectors.

The Timeframe: The survey was conducted in Spring 2000.

The Participants and Setting: Part-time students enrolled in the MBA program typically work full-time and are heavily represented in the areas of telecommunication, information technology, finance, consulting, and defense and security work. As such, they have fairly marketable skills, enhanced by their acquisition of an MBA. While prospects of an economic downturn might make potential job changers more cautious and opportunities might be reduced, the experience level of the students would still afford them considerable market mobility.
Measures

Current pay level
Pay level information in terms of salary level was obtained directly from company records. Although the participants were salaried, we rescaled the salary level to a bi-weekly pay amount for analysis purposes.

Distributive and procedural justice
Employee perceptions of distributive justice with respect to pay were measured with four items developed to address pay equity perceptions regarding the external, internal, and individual equity considerations that are commonly viewed as important in the design of fair pay plans (Milkovich & Newman, 2004; Scholl, Cooper, & McKenna, 1987; Wallace & Fay, 1988). An example is, ‘My pay compared with people who do the same or similar type of work in this company.’ Similarly, we assessed participants’ perceptions regarding the fairness of the procedures for determining their pay with two items: ‘The steps involved in determining my pay,’ and ‘Overall, the procedures used in determining my pay.’ These items were adapted from the two-item scale used by Greenberg (1987). For both scales, responses were on a 7-point scale ranging from ‘very unfair’ to ‘very fair.’

We conducted confirmatory factor analysis (CFA) using EQS 6.0 to examine the factor structures of the items used to assess distributive and procedural justice. According to Hu and Bentler (1999), a model is considered as an excellent fit if Comparative Fit Index (CFI) is greater than or equal to 0.96 and Residual Mean-Square Error of Approximation (RMSEA) is less than or equal to 0.06. Results from the CFA showed that the items loaded on their respective scales and the two-factor model had an excellent fit (chi-square ($\chi^2$) = 9.31, degrees of freedom (df) = 7, $p > 0.10$; CFI = 0.995; RMSEA = 0.052). The coefficient alphas for the distributive and procedural justice scales were 0.87 and 0.89, respectively.

Pay level and pay raise satisfaction
Employees’ pay level satisfaction and pay raise satisfaction were measured using the four-item corresponding scales from the Pay Satisfaction Questionnaire (PSQ; Heneman & Schwab, 1985). Participants responded on a 7-point scale ranging from ‘very dissatisfied’ to ‘very satisfied’ on items such as ‘my take home pay’ for pay level and ‘my most recent pay raise’ for pay raise. Prior CFA results (Judge & Welbourne, 1994) support the dimensionality of the two scales. We also conducted CFA on the eight items comprising the two scales. Initial CFA results indicated that the items loaded on their respective factors and the two-factor model had an excellent fit to the data ($\chi^2$ = 10.60, df = 17, $p > 0.10$; CFI = 1.000; RMSEA = 0.000). The coefficient alphas for pay level satisfaction and pay raise satisfaction scales were 0.96 and 0.84, respectively.

Turnover
Employee turnover information was taken from company records, which also included the reasons for termination provided by the supervisor, for a two-year period subsequent to the survey. During that period, 32 per cent of the study participants voluntarily left the organization.

Results

Means, standard deviations, and inter-item correlations for the Study 1 variables are presented in the lower part of Table 1. To address the hypotheses, we conducted a path analysis using EQS 6.0 with Satorra-Bentler scaled chi-square with robust standard errors estimation for models with categorical
dependent variables. In testing the interactive effects of procedural justice and distributive justice, we mean-centered the two variables and multiplied them to create a product term that was used as an additional predictor of pay raise satisfaction within the path model (Cohen, Cohen, West, & Aiken, 2003; Kline, 1998). Results of the path analysis indicated that our hypothesized model generally fit the data well ($\chi^2 = 10.909; df = 7; p > 0.10; CFI = 0.986; RMSEA = 0.068$; see Figure 2). The CFI and RMSEA values fell within the bounds of acceptable fit (e.g., Bagozzi & Yi, 1988; Browne & Cudeck, 1993; Hoyle & Panter, 1995; MacCallum, Browne, & Sugawara, 1996).

Hypothesis 1 predicted that distributive justice would be positively related to (a) pay level satisfaction and (b) pay raise satisfaction, (c) with the relationship being stronger in the former case. Figure 2 shows that distributive justice was positively related to pay level satisfaction ($\beta = 0.70, p < 0.001$) and pay raise satisfaction ($\beta = 0.34, p < 0.001$). We further assessed the strength of these relationships by comparing the hypothesized model (Figure 2) and a model that constrained the paths to pay level satisfaction and pay raise satisfaction to be equal. Using a chi-square difference test, results showed that the fit of the model became significantly worse when the two paths were constrained ($\Delta \chi^2 = 13.70, \Delta df = 1, p < 0.05$), thus supporting the prediction that the relationship between distributive justice and pay level satisfaction is stronger than that between distributive justice and pay raise satisfaction. Due to the relatively high beta coefficient of the relationship between distributive justice and pay level satisfaction, we examined if the two constructs were distinct from each other following the procedure used in prior studies (e.g., Bagozzi & Heatherton, 1994; Bagozzi & Yi, 1988; McAllister, 1995). Thus, we fixed the path to pay level satisfaction from distributive justice to 1, and then compared the fit indices of the constrained model to the hypothesized model. However, the constrained model had worse fit to the data than the hypothesized model ($\Delta \chi^2 = 16.07, \Delta df = 1, p < 0.001$), suggesting that the two constructs were distinct. Overall, these results provide support for Hypotheses 1a-1c.

Hypothesis 2a predicted a positive relationship between pay level and distributive justice. As expected, higher pay was associated with higher distributive justice ($\beta = 0.27, p < 0.01$). Hypotheses 2b (i) and (ii) predicted a mediating effect of distributive justice between pay and both pay level satisfaction and pay raise satisfaction. As reported in Hypotheses 1 and 2a, distributive justice was associated with pay and higher levels of pay level satisfaction and pay raise satisfaction. In order to test for the full mediation of distributive justice, we added paths from pay to both pay level and pay raise satisfaction dimensions (not shown in Figure 2). However, these paths were not significant ($\beta = 0.01, p > 0.10$ and $\beta = 0.05, p > 0.10$, respectively), suggesting that distributive justice fully

Table 1. Means, standard deviations, and correlations

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<td>0.79***</td>
<td>0.61****</td>
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<td>4.08</td>
<td>1.43</td>
<td>0.20*</td>
<td>0.84***</td>
<td>0.67***</td>
<td>1.00</td>
<td>0.68***</td>
<td>-0.31**</td>
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<td>Pay raise satisfaction</td>
<td>4.33</td>
<td>1.37</td>
<td>0.18*</td>
<td>0.68***</td>
<td>0.79***</td>
<td>0.74***</td>
<td>1.00</td>
<td>-0.36***</td>
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<td>Turnover intention</td>
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<td>1.00</td>
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<td>Voluntary turnoverb</td>
<td>1.33</td>
<td>0.47</td>
<td>-0.22*</td>
<td>-0.15</td>
<td>-0.14</td>
<td>-0.15</td>
<td>-0.19*</td>
<td>—</td>
<td>1.00</td>
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*p < 0.05; **p < 0.01; ***p < 0.001.
Study 1 descriptive statistics are presented below the diagonal; Study 2 descriptive statistics are presented above the diagonal.
N = 121 for Study 1 and 100 for Study 2.
*aThis refers to the average salary category, which represents the range between $60,000 and $74,999.
b*Voluntary turnover was coded as 0 = left, and 1 = stayed.
mediated the relationship between pay and pay level satisfaction and pay raise satisfaction. Thus, Hypotheses 2b (i) and (ii) were supported.

Hypothesis 3 predicted direct effects of procedural justice on (a) pay level satisfaction and (b) pay raise satisfaction, (c) with the effect being stronger in the latter case. As Figure 2 shows, procedural justice was positively related to pay level satisfaction (\( \beta = 0.25, p < 0.001 \)) and pay raise satisfaction (\( \beta = 0.57, p < 0.001 \)). We also compared the strength of these relationships by comparing the hypothesized model (Figure 2) with another model that constrained the paths for pay raise satisfaction and pay level satisfaction to be equal. The results show that the fit for the constrained model was worse than for the hypothesized model (\( \Delta \chi^2 = 11.54, \Delta df = 1, p < 0.05 \)), thus supporting the prediction that the relationship between procedural justice and pay raise satisfaction is stronger than that between procedural justice and pay level satisfaction. Therefore, Hypotheses 3a-3c were supported.

Hypothesis 4 predicted that procedural justice would moderate the relationship between distributive justice and pay raise satisfaction. This hypothesis was not supported (\( p > 0.10 \)). As a supplement, we also tested whether procedural justice moderated the relationship between distributive justice and pay level satisfaction; however, as anticipated, that path was not significant (\( p > 0.10 \)).

Hypothesis 5 proposed that (a) pay level satisfaction and (b) pay raise satisfaction would be negatively associated with turnover. Results indicated that only pay raise satisfaction was negatively related to employee turnover (\( \beta = -0.36, p < 0.05 \)), whereas the link between pay level satisfaction and turnover was not significant (\( p > 0.10 \)). Thus, these results provided support for Hypothesis 5b, but not for Hypothesis 5a.

Overall, the findings of Study 1 supported the notion that distributive justice would mediate the relationship between pay and both pay level satisfaction and pay raise satisfaction, with a stronger relationship with pay level satisfaction. Also, as expected, procedural justice was directly and positively

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**Figure 2. Study 1 Results**

\(* * * = p < 0.001; * * = p < 0.01; * = p < 0.05\).

Paths from pay to procedural justice and DJ\(*\)PJ (distributive justice X procedural justice) were included for statistical purposes only. Significance tests are two-tailed.

Error covariances: \(E_{PJ,E_{DJ}} = 0.61***\); \(E_{PLS,E_{PRS}} = 0.24**\).

Fit Statistics: \(\chi^2 = 10.91; df = 7; p > 0.10; CFI = 0.986; RMSEA = 0.068\).
related to both forms of pay satisfaction, with a stronger association with pay raise satisfaction. There was, however, no moderating effect of procedural justice on the relationship between distributive justice and pay raise satisfaction. As expected, pay raise satisfaction was negatively related to turnover; but, contrary to the predicted relationship, pay level satisfaction was not significantly predictive of turnover.

Study 2

Because our first study involved a single organization, we next sought to expand the generalizability of our findings by conducting a second study, which involved employees from a number of different organizations. In this study, we also included turnover intention, a variable that previous literature suggests is predictive of subsequent turnover (Griffeth et al., 2000).

Method

Sample and procedure
Participants in Study 2 were 194 part-time MBA students at a large public university in the mid-Atlantic region of the United States. Surveys and stamped return envelopes were distributed to the students in core MBA management classes and were returned directly to the research team. The total number of surveys returned was 148, constituting a return rate of 76 per cent. We were able to subsequently collect turnover data for 100 of these respondents, who constituted the final sample for analyses in this study. With respect to the study variables, there were no differences between those for whom we were able to obtain turnover data and those for whom we could not. Among those who constituted our sample for this study, 79 per cent were male; and 54 per cent worked for their current organization for 1 to 3 years, 20 per cent for 4 to 6 years, and 18 per cent for more than 6 years.

Measures

Current pay level. Participants were asked to indicate their current salary by selecting one of eight categories. The categories ranged from ‘less than $15,000’ to ‘above $105,000,’ in increments of $14,999.

Distributive and procedural justice. We used the same measure as for Study 1 to assess distributive justice. We measured procedural justice with four items used by Byrne and Cropanzano (2000). An example is ‘The procedures the organization uses to make compensation decisions are not fair.’ Responses were on a 5-point scale ranging from ‘strongly disagree’ to ‘strongly agree.’ We conducted CFA to examine the factor structure of the dimensions. The two-factor model had a good fit ($\chi^2 = 26.79$, df = 17, $p > 0.05$; CFI = 0.983; RMSEA = 0.063). The coefficient alphas were 0.89 and 0.74 for distributive and procedural justice, respectively.

Pay level and pay raise satisfaction. Measures for pay level satisfaction and pay raise satisfaction were the same as for Study 1. We also conducted CFA in this study to verify the pay level satisfaction and pay raise satisfaction dimensions. The two-factor model had excellent fit ($\chi^2 = 15.92$, df = 17, $p > 0.10$; CFI = 1.000; RMSEA = 0.000). The coefficient alphas for the pay level satisfaction and pay raise satisfaction dimensions were 0.96 and 0.85, respectively.
**Turnover intention.** Participants’ turnover intention from the organization was assessed with three items from Cammann, Fichman, Jenkins, and Klesh (1979), cited in Cook, Hepworth, Wall, and Warr, (1981). The items also have been used in other studies (e.g., Shore & Barksdale, 1998). One sample item was: ‘I will actively look for a new job outside my organization in the next year.’ Responses were on a 5-point scale ranging from ‘strongly disagree’ to ‘strongly agree.’ Coefficient alpha was 0.82.

**Turnover.** After two years, we contacted all respondents to the initial survey and asked them whether they were still working with the same company. Among the 100 who replied, 43 per cent reported that they had left their company in favor of a new employer. As far as could be discerned, none of the departures had been involuntary. This study was conducted during a period of low unemployment during which employers in the region were struggling to retain employees.

**Results**

Means, standard deviations, and correlations for the variables in Study 2 are presented above the diagonal in Table 1. We also used EQS 6.0 version with Satorra-Bentler scaled chi-square with robust standard errors estimation for models with categorical variables to test the fit of the proposed model. The resulting indices indicated a good fit ($\chi^2 = 16.054$, $df = 13$, $p > 0.05$; CFI = 0.983; RMSEA = 0.049; see Figure 3).

Hypothesis 1 predicted that distributive justice would be positively related to (a) pay raise satisfaction and (b) pay level satisfaction, (c) with the relationship being stronger in the latter case. Figure 3 shows that distributive justice was positively related to pay level satisfaction ($\beta = 0.77$, $p < 0.001$) and pay raise satisfaction ($\beta = 0.51$, $p < 0.001$). We followed the same procedure as we did for Study 1 to examine the strength of the two relationships. The results showed that the

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Figure 3. Study 2 Results

*** = $p < 0.001$; ** = $p < 0.01$; * = $p < 0.05$.

Paths from pay to procedural justice and DJ*PJ (distributive justice X procedural justice) were included for statistical purposes only. Significance tests are two-tailed.

Error covariances: $E_{pj}, E_{dj} = 0.29**; E_{pls}, E_{prs} = 0.37**$.

Fit Statistics: $\chi^2 = 16.09; df = 13; p > 0.10$; CFI = 0.983; RMSEA = 0.049.
fit for the constrained model was worse than for the hypothesized model ($\Delta \chi^2 = 8.28$, $\Delta df = 1$, $p < 0.05$). Thus, consistent with the hypothesis, the relationship between distributive justice and pay level satisfaction was stronger than that between distributive justice and pay raise satisfaction. Furthermore, we examined whether distributive justice and pay level satisfaction constructs were distinct given the relatively high beta coefficient of the relationship reported above. Similar to Study 1, we fixed the path to pay level satisfaction from distributive justice to 1, and then compared the constrained model to the hypothesized model. The fit indices show that the constrained model had worse fit to the data ($\Delta \chi^2 = 10.18$, $\Delta df = 1$, $p < 0.001$). This suggests that allowing the path to be freely estimated provides a better fit than the constraint of the path to unity. Overall, these results provided support for Hypotheses 1a-1c.

Hypothesis 2a predicted a direct relationship between pay level and distributive justice. As expected, higher pay was associated with higher distributive justice ($\beta = 0.23$, $p < 0.05$). Hypotheses 2b (i) and (ii) predicted that distributive justice would mediate the relationship between pay and pay level and pay raise satisfaction. As reported in Hypotheses 1 and 2a, distributive justice was associated with pay and higher degrees of pay level satisfaction and pay raise satisfaction. To test for full mediation, we added direct paths from pay to pay level satisfaction and pay raise satisfaction (not shown in Figure 3). However, both paths were not significant ($\beta = 0.04$, $p > 0.10$ and $\beta = 0.02$, $p > 0.10$, respectively), indicating that distributive justice fully mediated the relationship between pay and pay level satisfaction and pay raise satisfaction. Overall, these results provided support for Hypotheses 2b (i) and (ii).

Hypothesis 3 predicted a direct and positive relationship between procedural justice and (a) pay level satisfaction and (b) pay raise satisfaction, (c) with the effect being stronger in the latter case. As presented in Figure 3, procedural justice directly and positively influenced pay raise satisfaction ($\beta = 0.24$, $p < 0.01$), but not pay level satisfaction ($p > 0.10$). Furthermore, we also examined the strength of relationships using the same procedure in Study 1. Results show that the constrained model was marginally, significantly worse than the hypothesized model ($\Delta \chi^2 = 3.34$, $\Delta df = 1$, $p < 0.10$). Thus, Hypothesis 3a was not supported, while Hypothesis 3b and 3c were supported.

Hypothesis 4 predicted a moderating effect of procedural justice on the relationship between distributive justice and pay raise satisfaction. This moderating effect was significant ($\beta = -0.13$, $p < 0.05$) and in the expected direction in that the relationship between distributive justice and pay raise satisfaction was weaker under high procedural justice than it was under low procedural justice. We also tested the moderating effect of procedural justice on the relationship between distributive justice and pay level satisfaction; however, as anticipated, the path was not significant ($p > 0.10$). Overall, Hypotheses 4 was supported.

Hypotheses 5a and 5b predicted direct, negative relationships between pay level satisfaction and pay raise satisfaction and turnover intention. Results indicated that only pay raise satisfaction was negatively related to turnover intention ($\beta = -0.27$, $p < 0.05$). Pay level satisfaction was not significantly related to turnover intention ($p > 0.10$). These results provide support for hypothesis 5b, but not for hypothesis 5a. Consistent with prior studies, turnover intention predicted actual turnover ($\beta = 0.36$, $p < 0.001$).

Supplementary analysis

Because of recent indications that dichotomous dependent variables, such as actual turnover, possess an s-shaped association to their predictors that violates the linearity assumptions of SEM and could potentially impact our results (Liao, 1994; Long, 1997), we ran two alternative analyses to evaluate the extent to which this violation likely impacted the findings of our studies. In conducting these cautionary analyses, we first ran our SEM models for both studies without the dichotomous dependent variable. In Study 1, we obtained almost identical results with respect to the relationships among pay,
justice perceptions, and pay level and raise satisfaction. Similarly, in Study 2, results for relationships among pay, justice perceptions, and pay level and raise satisfaction, and turnover intention were virtually the same as when actual turnover was included in the model. As a further test, we ran two logistic regressions. For Study 1, we regressed turnover on pay level satisfaction and pay raise satisfaction. The results from Study 1 show that the relationship between pay raise satisfaction and actual turnover was significant ($p \leq 0.05$), while the relationship between pay level satisfaction and turnover was not significant ($p > 0.05$). For Study 2, we regressed actual turnover on turnover intentions. Results showed that turnover intention was significantly related to actual turnover ($p < 0.05$). Both these results were consistent with our SEM analysis. For Study 2, we also regressed actual turnover on pay level satisfaction and pay raise satisfaction, with results showing a nonsignificant relationship for pay level satisfaction ($p > 0.10$) and a relationship that closely approached significance for pay raise satisfaction ($p = 0.053$). As a final check, we also re-ran the model in both studies using MPlus program. The results were similar to those reported in the current study.

Discussion

This research makes three important contributions. First, in support of calls by a number of researchers (e.g., Heneman & Judge, 2000; Miceli & Mulvey, 2000; Tremblay, Sire, & Balkin, 2000) for recognition that pay satisfaction is multidimensional, this study demonstrates the critical need to differentiation between pay level satisfaction and pay raise satisfaction when considering justice theory dimensions and pay satisfaction. As hypothesized, distributive and procedural justice played somewhat different roles with respect to pay level satisfaction and pay raise satisfaction. The second contribution is that it begins to more adequately integrate justice theory with multidimensional pay satisfaction theory in predicting turnover, an outcome of high interest to organizations. The study findings not only show that justice considerations differentially impact pay satisfaction dimensions, but also that the pay satisfaction dimensions, in turn, differentially impact turnover. Finally, it contributes by demonstrating the robustness of our theoretical frame. The two separate studies, one in a single organization and the second among participants from a variety of organizations, produced similar findings that support the critical need to take the multidimensional nature of pay satisfaction into account when attempting to assess the impact of distributive and procedural justice judgments on pay satisfaction and turnover.

In considering the specifics of our findings, distributive justice significantly influenced satisfaction with pay level, supporting previous studies indicating a significant association between distributive justice and pay level satisfaction (e.g., Summers & Hendrix, 1991; Sweeney, 1990; Sweeney & McFarlin, 1993). As suggested by Folger and Konovsky (1989), distributive justice also had a significant impact on pay raise satisfaction. However, our study is unique in demonstrating a stronger relationship between distributive justice judgments and pay level satisfaction than pay raise satisfaction. In addition, as expected, distributive justice mediated the relationship between pay and pay raise satisfaction in both studies. Although a number of studies have documented a link between distributive justice and pay satisfaction, the mediation role has rarely been tested (see Sweeney, 1990 for an exception) and, to our knowledge, has not been tested previously with both the pay level and pay raise satisfaction dimensions.

As hypothesized, procedural justice judgments had significant direct effects on pay raise satisfaction in both studies. However, procedural justice was significantly related to pay level satisfaction only in Study 1. Still, the results support the basic thrust of our arguments, namely that procedural justice
would be more strongly related to pay raise satisfaction than to pay level satisfaction. Thus our findings buttress a suggestion by Miceli and Mulvey (2000) that procedural justice is likely to be more strongly related to pay satisfaction dimensions that encompass greater focus on the allocation system itself than to pay level satisfaction per se.1

Although a number of researchers have posited an interaction between the evaluations of procedures and outcomes (e.g., Brockner & Wiesenfeld, 1996), findings for Study 1 did not support a moderating effect of procedural justice on the relationship between distributive justice and pay raise satisfaction. However, the moderating relationship received support in Study 2, although the results were relatively weak in comparison with the direct effects. These results imply that procedural justice has not only a direct effect on pay raise satisfaction, as shown by the moderate effect size, but also a moderating effect in some instances, as evidenced in Study 2. Overall, these results are consistent with our arguments based on fairness heuristic theory, namely that interaction effects are likely to be weak, if they exist at all, with respect to pay raise satisfaction. We posit that pay raise situations are likely to be somewhat mixed in terms of information available that can be used to make direct comparisons with respect to the fairness of outcomes. Given that there is likely to be at least some comparative information available, even if it is only intrapersonal in nature—such as previous raises—employees will have less need to rely solely on knowledge of procedures that might trigger the fair process effect (Van den Bos et al., 1997). With the fair process effect, individuals tend to rely on procedural justice perceptions as a heuristic to compensation for the lack of comparative distributive information. Thus, our findings are in line with recent arguments by Lind (2001) that the interaction effects notion may have been applied too broadly by Brockner and Wiesenfeld (1996), a stance currently supported by Brockner (2002), as well.

Still, we found an interaction effect in Study 2 in line with the fair process effect. In that study, individuals were from a variety of organizations and may have had exposure to a more diverse set of information and more divergent procedures. At this point, it would be useful to conduct laboratory research in which the amount of comparative pay information is varied so as to learn more about how and why fair process effects are set in motion versus not. Such studies would also have important practical implications as organizations continually struggle with how much information and what type is useful to communicate in a context of desiring to pay for performance and also wishing to create a system that is perceived as fair (Bartol & Locke, 2000; Milkovich & Newman, 2004). Of course, aspects of procedural justice could be varied as well.

The findings here provide evidence for the notion that justice considerations influence pay satisfaction and ultimately impact turnover. Interestingly, in both studies, only pay raise satisfaction was a significant predictor of turnover intentions or turnover itself. These results suggest that organizations and managers need to pay increased attention to pay raise procedures and outcomes. This makes sense given the shift toward greater emphasis on pay for performance, at least in the U.S. (Milkovich & Newman, 2004). Cost of living increases per se are on the wane and automatic step increases are becoming uncommon except in some unionized situations. As raises depend more on performance, which usually involves at least some subjective assessment by supervisors, procedural issues become more complex and are more likely to garner perceptions of inequity and unfairness. As equity theory (Adams, 1963) has long indicated, perceptions of pay equity—and ultimately satisfaction with pay—depend less on the dollar value of a raise in an objective sense than on comparative issues.

1Because some researchers have suggested that procedural justice also may be related to pay system satisfaction as measured by the PSQ, we tested pay system satisfaction in our model in place of pay raise satisfaction. Although procedural justice was related to pay system satisfaction, pay system satisfaction itself did not, in turn, predict turnover or turnover intention.
Aside from issues of perceiving performance accurately, related research suggests that managers have difficulty making differentiations in pay among workers for several reasons. One reason is that managers often do not want to alienate workers by making strong differentiations among performance in allocating pay, even when they are warranted (Bartol & Durham, 2000). Other research indicates that managers consider their own strategic needs for retaining particular workers on whom they are dependent and will make pay allocations to protect such dependencies even when they are not deserved in terms of actual performance (Bartol & Martin, 1989). Still other evidence indicates that in allocating pay managers may disadvantage workers with contingencies (such as relatives in the area) that might impede their mobility (Bartol & Martin, 1990). Thus, within pay for performance systems, managers are subject to a number of competing pressures that provide boundary conditions in how pay is allocated and, in turn, how employees might react.

Managers must also grapple with the fact that a large percentage of workers tend to consider themselves above average and are likely to view indications to the contrary as unfair (Bartol, Durham, & Poon, 2001). Thus, as fairness heuristic theory arguments suggest, pay raises potentially convey information about standing in the workplace as perceived by management (Mohrman, et al., 1989; Van den Bos et al., 1997). As such they may be perceived as containing signals relevant to both short- and long-term career prospects. Hsee and Abelson’s (1991) notions regarding individual concerns with velocity, the direction and rate of change in making assessments of allocation situations, have not been investigated sufficiently with respect to pay raise impact, and constitute a promising direction for future research.

Given the strong job market existing at the time of Study 1, it is possible that individuals were particularly attuned to their pay progress, since salient options clearly existed as conveyed through the active recruiting of competitor companies. This fact may have led to the higher standard deviation for pay raise satisfaction for the single firm than for the multi-firm study. In the case of the part-time students, they have tended to be reluctant to change jobs early in the MBA program because they are severely cramped for time, need stability, and have not accrued sufficient increments in human capital from the program to aid marketability. Yet, as they acquire new skills and credentials, they likely increasingly monitor the situation and become more prone to shift employers unless they see some recognition of their increasing worth from their current employers (Benson, Finegold, & Mohrman, 2004). Thus, for different reasons, participants in both of these studies may have been particularly apt to monitor their pay raise situation. Still, we would argue, based on justice- and referent-related literature (e.g., Bartol & Martin, 1998; Goodman, 1974; Van den Bos et al., 1997), that normally employees receiving raises are likely to be concerned with their own self-interests and the implications.

As a result, we would expect market factors to play a role in how employees ultimately react to low pay raise satisfaction. In Study 1, the job market situation remained strong for the duration of the study, whereas Study 2 participants faced a deteriorating job market. Yet, because of their job experience and MBA training, the participants of Study 2 were still able to exercise considerable job mobility. In times of substantial unemployment or when skills and experience limit job prospects, it seems reasonable to speculate that lower pay raise satisfaction might not be predictive of higher turnover simply because individuals are not able to move. What options might employees then pursue? One might be to attempt to adjust behaviors to the perceived reward system as explicated in the raise and any explanation provided. Another might be to attempt to change the behavior of the allocator through such influence tactics as complaining about the procedures, engaging in impression management, and attempting to ingratiate oneself (e.g., Yukl & Falbe, 1990). Research also points to a variety of withdrawal means that employees might pursue, such as absenteeism and elongated lunch hours (Hulin, Roznowski, & Hachiya, 1985), although such behaviors may be risky when there are few job options available.

Types of pay systems, other than pay-for-performance ones, might also constitute boundary conditions for our results. For example, in systems in which employees receive automatic step increases,
such systems neither differentiate according to performance nor convey information about standing. Under such circumstances, pay raise satisfaction may be less important than pay level in assessing one’s progress. Traditional forms of incentive pay, such as commissions and piece-rate systems, might also require adjustment of our model. For example, employees working strictly or heavily on a commission bases, as is the case in some sales situations, would probably not be attuned to pay raises per se; but might be influenced by other rewards, such as higher commission rates or territories. Similar comments would apply to piece-rate systems (a specified rate of pay for each unit produced or each service provided), another traditional incentive system.

The availability of other supplemental forms of pay might also influence the importance of pay raises. For example, a number of organizations have introduced variable pay, which is performance related compensation that does not permanently increase base pay, and must be re-earned to be received again (Bartol & Durham, 2000). One common form is the bonus, which, at lower levels in the organization, is often matched with below market base pay. This approach allows employees to earn more than market pay when performance is good, but potentially less than market pay when performance is poor. An advantage of such systems for organizations is that they achieve greater flexibility and control over labor costs, particularly during down times. However, such systems tend to be less popular with employees unless bonuses are matched with market pay. Hence, even with bonus systems employees are likely to be very interested in the size of their pay raise, which does permanently increase their base pay and is not ‘at risk.’ Bonus are ‘at risk’ in the sense that they depend on performance, which can often be somewhat outside the control of employees (e.g., economic conditions). At higher levels, where more pay is allocated in the form of bonuses (Milovich & Newman, 2004), bonuses are likely to have a stronger influence; and, hence, satisfaction with bonuses could potentially exceed satisfaction with pay raises in importance as a predictor of turnover at higher levels. Stock options, another form of variable pay, could also come into play. Although stock options had recently become more popular as a compensation mechanism for employees at lower levels in organizations, new standards for stock-based compensation (FAS123(R)) promulgated by the Financial Accounting Standards Board have made extending stock options to lower levels very unattractive to firms. Thus, stock option impacts are likely to be confined mainly to high levels of firms.

More customized and flexible approaches to pay/reward systems might also be a useful avenue for future research related to our findings. For example, Rousseau (2001) has suggested possibilities for ‘idiosyncratic deals’ whereby features of employment that an individual worker receives may differ from those of other workers in similar roles. Negotiating such deals requires trust between a manager and a worker, as well as respect for each other’s interests. The notion of such ‘deals’ offers possibilities for variations in pay and related rewards. Such arrangement may allow conveying standing and value to employees, while also being more geared to individual needs. More idiosyncratic deals (See Rousseau (2001) for more conditions necessary for success) also could shift the weight placed on pay raise satisfaction per se. These potential boundary conditions for our theoretical model offer fruitful avenues for future research.

Despite the unique contributions of the present studies, they are not without limitations. For example, all of the attitudinal data were collected at a single point in time, although we attempted to mitigate this factor by collecting behavior information—that is, the actual turnover data—at a separate point in time. Although pay information was collected from respondents in Study 2, analyses by Crampton and Wagner (1994) of numerous investigations suggest that reports of pay amount tend to be relatively free of same source inflation. Moreover, the pay information was collected from company records in Study 1, yet the results for pay amount and the impact on distributive justice were the same in both studies. Another limitation is that only 52 percent of Study 1 participants provided their employee number to allow the tracking of turnover; and that the 48 percent of participants who did not provide their number had statistically significantly lower distributive justice perceptions, possibly constituting a threat to the
generalization of the results of the investigation. However, this threat is reduced by the fact that the test in this study could be considered as a conservative estimate of the relationship and that these results were replicated in another sample.

All of the respondents in Study 1 were from the same organization and presumably were influenced by the specific characteristics of the pay system in operation. Thus, this factor could potentially heavily influence our results. To extend the generalizability of Study 1, we conducted our second study with participants from a variety of organizations and obtained substantially the same findings. Nevertheless, it would be useful to conduct further studies among other groups, such as non-exempt employees to assess the extent to which the results obtained here hold for an even wider variety of participants. Also studies with other pay dimensions are warranted.

Overall, the two studies reported in this article highlight the importance of distinguishing between at least two pay satisfaction dimensions, pay level and pay raise, when considering the impact of both distributive and procedural justice on compensation system administration, at least in systems aimed at pay for performance. Specifically, this study is the first that we know of demonstrating a stronger relationship between distributive justice and pay level satisfaction than with pay raise satisfaction and showing a stronger relationship between procedural justice and pay raise satisfaction than with pay level satisfaction. As such, these findings support recent calls to pay greater theoretical and empirical attention to the fact that pay satisfaction is multidimensional (Heneman & Judge, 2000; Miceli & Mulvey, 2000). The second theoretical contribution of the study is that the results highlight the particular importance of procedural justice with respect to pay raise satisfaction findings. This is especially worthy of note because it was pay raise satisfaction that was significantly related to turnover intention and, ultimately, to turnover. Of course, to the extent that lower pay raises are given to lower performers and are likely to lead to lower pay raise satisfaction, the connection between pay raise satisfaction and turnover intentions may help to facilitate the voluntary turnover of lower performers. As Hom and Griffeth (1995) have pointed out and Allen and Griffeth (2001) have demonstrated, not all turnovers are negative for the organization. We have pointed out several areas in need of further research, particularly within the context of fairness heuristic theory.

The implications for organizations are certainly to give close attention to the fairness of procedures related to pay raise allocations and to be concerned about how pay raise information is conveyed to employees. On the issue of procedures, it may be useful to explain pay raise procedures when conveying pay raise distributions so that individuals can use the information as part of their determination of their pay raise satisfaction, which, in turn, has impact on employee turnover intention and actual turnover. Of course, this assumes that pay raise procedures are reasonably fair. Organizations may want to assess the fairness of their pay raise procedures and make improvement where necessary. One useful guideline would be Leventhal’s (1980) well known structural rules of procedural justice. Additionally, the work of Hsee and Abelson (1991) on velocity suggests that it may be particularly important in pay raise discussions to address issues of individuals’ progress in the organization and, particularly, things that they can do to aid their development and increase their future prospects.

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