EXTENDING THE CHAIN OF RELATIONSHIPS AMONG ORGANIZATIONAL JUSTICE, SOCIAL EXCHANGE, AND EMPLOYEE REACTIONS: THE ROLE OF CONTRACT VIOLATIONS

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This study extends prior research on the chain of relationships among organizational justice, social exchange relationships, and employee reactions by investigating the proposed mediating role of psychological contract violations. Results obtained from a longitudinal design examining a sample of 191 employees provide strong support for the proposal, enhance support for chain directionality, validate theoretical predictions about determinants of contract violations, and provide initial evidence supporting a proposed integration of perceived organizational support and psychological contract theory.

As firms struggle to use their human resources more effectively in gaining competitive advantage, it is not surprising that the employee-organization relationship has frequently emerged as a topic of interest for both organizational researchers and executives (Cappelli, 1999; Erlich, 1994; Rousseau, 1995; Tsui, Pearce, Porter, & Hite, 1995). Prior empirical research (Cropanzano, Prehar, & Chen, 2002; Masterson, Lewis, Goldman, & Taylor, 2000; Rupp & Cropanzano, 2002) has provided considerable evidence that the level of organizational justice present in management decisions about employees is directly related to the quality of resulting social exchange relationships between the individuals and their employing organizations as well as between employees and organizational agents such as immediate managers. The resulting social exchange relationship repeatedly has proven to be a significant predictor of a number of important employee attitudes and behaviors, including job satisfaction, organizational commitment, organizational citizenship behaviors, intentions to leave, and others.

A small but consistent body of research has also established varying relationships between particular types of organizational justice and seemingly corresponding social exchange relationships. For example, procedural justice, which is the fairness of the formal procedures underlying organizations’ decisions about their employees (Thibaut & Walker, 1975), tends to predict perceived organizational support (POS), a social exchange relationship between employee and organization (Masterson et al., 2000; Wayne, Shore, Bommer, & Tetrick, 2002). On the other hand, interactional justice, which is the fairness of the interpersonal treatment displayed during the enactment of the procedures underlying organizational decisions (Bies & Moag, 1986), tends to predict leader-member exchange (LMX), a social exchange relationship between an employee and his or her immediate manager (Cropanzano et al., 2002; Masterson et al., 2000). In a recent review of the causes of justice effects, Cropanzano, Rupp, Mohler, and Schminke summarized a frequently cited explanation for these effects:

From a justice perspective, fair treatment (among other causes) is posited to create closer, open-ended social exchange relationships. These types of relationships produce obligations for the employee to repay the supervisor or the organization. Hence per-
formance, OCB, and so on are likely to result (Cropanzano et al., 2001: 42).

Thus, findings from a number of different studies now support the existence of a chain of relationships among organizational justice, social exchange relationships, and employee attitudinal and behavioral reactions.

With this study, we make two primary contributions to the existing literature linking procedural justice, POS, and employee reactions. First, we developed and empirically tested conceptual hypotheses proposing mediating effects of psychological contract violations in the chain of relationships among the three variables. A psychological contract violation exists when an employee perceives that his or her organization has failed to meet its obligations to him or her (Morrison & Robinson, 1997). Establishing such a mediating effect is important because, as Cropanzano and coauthors (2001) noted in a recent review of the explanations for organizational justice effects, the psychological contract is one of five variables recent researchers have used to “operationalize” the social exchange relationship concept in the growing body of literature examining the chain of relationships between justice, social exchange, and employee reactions. The psychological contract is defined as “individual beliefs, shaped by the organization, regarding terms of an exchange agreement between individuals and their organization” (Rousseau, 1995: 9). Further, proposals regarding the role of psychological contract violations, an increasingly important variable within contract theory, have now emerged from three separate research streams: (1) examinations of how organizational justice and social exchange relationships are related to one another and affect relationship partners (Cropanzano et al., 2001, 2002; Rupp & Cropanzano, 2002); (2) work on relationships between POS and the psychological contract (Aselage & Eisenberger, 2003; Taylor & Tekleab, 2004); and (3) psychological contract theory predictions about the antecedents of contract violations on the part of organizations (Morrison & Robinson, 1997; Rousseau, 1995). Thus, by testing hypotheses regarding the heretofore unexamined mediating effect of psychological contract violations in the relationship between POS and employee reactions, this research contributes to the development of three distinct, albeit increasingly intertwined, conceptual literatures.

Our second contribution to research on the procedural justice–POS–employee reaction chain of relationships lay in the use of a longitudinal design that permitted stronger inferences about causal directions. Prior studies examining the links within this chain (e.g., Cropanzano et al., 2001; Masterson et al., 2000; Rupp & Cropanzano, 2002) have relied on cross-sectional data that did not permit strong inferences about causal directions. The design of this study covered two 3-year measurement periods and thus permitted stronger conclusions about the causality of these relationships.

Figure 1 shows the complete model of relationships examined by the research. Note that we do not develop formal hypotheses about relationships between procedural justice and POS and between interactional justice and LMX, because prior research has documented these associations (Cropanzano et al., 2002; Masterson et al., 2000). The next section develops the logic underlying our hypotheses about the mediating role of psychological contract violations.

### THEORY AND HYPOTHESES

#### The Mediating Role of Psychological Contract Violations

As noted above, three separate bodies of work have generated proposals linking contract viola-

![Figure 1: Hypothesized Model](image-url)

*“D” indicates a disturbance term. A dotted line indicates a partial mediation hypothesis.*
tions to the chain of relationships among procedural justice, POS, and employee reactions. The first of these, work by Cropanzano and his colleagues (Cropanzano, Prehar, et al., 2002; Cropanzano, Rupp, et al., 2001; Rupp & Cropanzano, 2002) on a more general organizational justice–social exchange relationship–work related criteria chain, has noted that the positive effect of experienced organizational justice on the development of a closer, higher-quality social exchange relationship over time is only a part of the story. Those researchers have hypothesized that over time, the development of high-quality, close social exchange relationships will exert effects of its own. The principal effect will be heightened psychological closeness. Further, such a relationship will cognitively bias the perceptions of one partner to the relationship (in our case, the employee) toward the behavior of the other (the organization) by making that behavior appear fairer (less likely a violation of the psychological contract) than is actually the case. Thus, Cropanzano et al. (2001) proposed a general effect of social exchange relationships on one party’s perceptions of the fairness of the other’s behavior that supports the negative effect of POS on employee perceptions of psychological contract violations.

Similar proposals have emerged from recent work conceptualizing the relationship between POS, defined as employees’ “global beliefs concerning the extent to which the organization values their contributions and cares about their well-being” (Eisenberger, Huntington, Hutchison, & Sowa, 1986: 501), and psychological contracts. A recent conceptual paper by Aselage and Eisenberger (2003) noted that the two concepts share a common foundation in social exchange theory (Blau, 1964; Gouldner, 1960; Homans, 1961), a foundation that generates three similarities in the theories. First, in both concepts, the exchange of valued socioemotional resources is an important mechanism in the development of the exchange relationship between employee and work organization. Second, in both, contributions by one party to the other are viewed as having greater value to the extent that they reflect the donor’s free will, rather than constraints imposed by powerful others (in the form of institutional rules or normative expectations, for example). Finally, according to both theories, procedural justice is an important antecedent of the high-quality employee-organization relationship that they represent, a relationship with important consequences for both parties, given its impact on employee attitudes and behaviors.

Yet Aselage and Eisenberger (2003) also noted important differences between the two theories, with perhaps the most critical one being POS’s emphasis on the level of support given to employees as contrasted with the psychological contract’s focus on promises made and kept. In POS theory, it is not what is promised to an employee, but rather, what is delivered to the employee, that determines the strength of the socioemotional bond called POS. Conversely, in psychological contract theory both the types of promises the two parties exchange and the extent to which they are met or violated are important determinants of the strength of the socioemotional bond between employee and organization. Note that the effects of contributions that are delivered but not promised are not considered in psychological contracts theory. Thus, Aselage and Eisenberger identified important differences between the two concepts and saw them as clearly delineating separate social exchange relationships.

Nevertheless, arguing that at this stage in the concepts’ development, the social exchange literature would benefit from a conceptual integration, Aselage and Eisenberger (2003) developed a model that deals with the relationship between POS and psychological contract fulfillment, the flip side of contract violation. The researchers proposed that high-quality POS (1) will make employees less likely to notice minor contract breaches (discrepancies between what their organization promised and delivered) and (2) will make employees who do notice a breach more willing to give the organization the benefit of the doubt—for example, they will view the breach as a temporary or unimportant occurrence, rather than a full-fledged violation. Overall then, employees with high POS are expected to perceive their organization as having fulfilled its obligations to them, the case opposite to that of contract violation. Thus, using wording similar to but more specific than that of Cropanzano et al. (2001), Aselage and Eisenberger hypothesized that “POS is positively related to the employee’s perceptions that the organization has fulfilled its obligations to them under the psychological contract” (2003: 504).

Finally, advocates of psychological contracts theory (e.g., Morrison & Robinson, 1997; Rousseau, 1995) have also proposed that a high-quality social exchange relationship between employee and organization will diminish the likelihood the employee will perceive psychological contract violation, although explanations for this prediction vary to some degree. Rousseau (1995) posited that strong employee-organization exchange will tend to override employees’ tendency to view small discrepancies between what was promised by the organization and what was received as violations, while a weak relationship may result in closer monitoring of the organization’s behavior and thereby enhance
the likelihood of perceived contract violations. Conversely, Morrison and Robinson (1997) posited that a lower-quality employee-organization exchange relationship is directly associated with the level of trust between employee and organizational employer. Subsequently, low trust will promote monitoring of organizational contributions by an employee and, as a result, a higher probability of perceived discrepancies between experienced outcomes and organizational obligations (which Morrison and Robinson termed “breaches”).

Note, however, that proposals from all three sources implicitly suggest a time lag between POS and the effects on contract violations. In some cases, a posited time lag occurs between the development of high-quality exchange and ignoring (Aseleage & Eisenberger, 2003; Rousseau, 1995) or biasing (Cropanzano et al., 2001) signs of discrepancies between promises and contributions. In other cases, the posited time lag occurs between the development of trust associated with high-quality exchange and decreased monitoring of organizational contributions (Morrison & Robinson, 1997). To date, none of these proposals have been empirically tested. Thus,

_Hypothesis 1. Employees’ perceptions of organizational support (POS) at time 1 will be negatively related to their experience of psychological contract violation at time 2._

As discussed above, LMX has also been defined and measured as a social exchange relationship. However, LMX refers to the relationship between an employee and his or her immediate manager (Cropanzano et al., 2002, Masterson et al., 2000). Psychological contract violations, in contrast, concern perceived discrepancies between obligations and experienced outcomes in the relationship between an employing organization and an individual employee. Given these differences in the parties to the relationships, we did not hypothesize a direct relationship between LMX and psychological contract violations.

Psychological contracts theory is clear in its proposals about the consequences of an employee’s perceiving a contract violation. Rousseau (1995) asserted that contract violations can motivate the development and display of employee attitudes and behaviors that are damaging to organizations, a proposal that has been supported by subsequent research. For example, contract violations have been negatively related to employee job satisfaction, role performance, and organizational citizenship behaviors and positively related to the likelihood of quitting (Robinson, 1996; Robinson & Morrison, 1995; Robinson & Rousseau, 1994; Turnley & Feldman, 2000). In the case of job satisfaction, employees who perceive that their organizational employer has failed to meet promised obligations will be less satisfied with their jobs or job experiences than those who perceive contract fulfillment (Homans, 1961). Thus,

_Hypothesis 2. Employees’ perceptions of psychological contract violation by an organization at time 2 will be negatively related to their level of job satisfaction at time 2._

On the basis of Hypotheses 1 and 2, we further propose psychological contract violations as an important mediator of the relationship between POS and employees’ reactions (that is, their job satisfaction). POS, as defined earlier, refers to an individual’s “global beliefs concerning the extent to which the organization values their contributions and cares about their well-being” (Eisenberger et al., 1986: 501), and job satisfaction refers to an “appraisal of one’s job or job experiences” (Locke, 1976: 1300). Given these definitions, it is perhaps not surprising that research examining the relationship between POS and job satisfaction has consistently shown a significant, moderate to large, positive relationship between the two variables (e.g., Allen, Shore, & Griffith, 2003; Eisenberger, Cummings, Armeli, & Lynch, 1997). In a recent meta-analysis, Rhoades and Eisenberger stated, “POS should contribute to overall job satisfaction by meeting socioemotional needs, increasing performance-reward expectancies, and signaling the availability of aid when needed” (2002: 701). This meta-analysis also showed a moderate to large relationship between POS and job satisfaction (an average weighted correlation of .62 after attenuation was adjusted for). Given the consistent research support for the POS–job satisfaction relationship and the breadth of job satisfaction as a variable (it has been linked to many aspects of jobs, including satisfaction with coworkers and job characteristics [Locke, 1976]), we expected that perceived psychological contract violation would only partially mediate the relationship between POS and job satisfaction. Thus,

_Hypothesis 3. Employees’ perceptions of psychological contract violation at time 2 will partially mediate the relationship between POS at time 1 and job satisfaction at time 2._

Consistent with existing conceptualizations of the consequences of contract violation, we also posited effects on employees’ behavioral reactions, although we expected these effects to occur indirectly, through job satisfaction. Assuming that employee job satisfaction decreases as a result of per-
ceived contract violations by an organization, prior researchers have suggested that such dissatisfaction will motivate such adverse behaviors as increased withdrawal—absenteeism, tardiness, intentions to quit (turnover intentions), and actual turnover (cf. Hom, Caranikas-Walker, Prussia, & Griffeth, 1992; Steel & Ovalle, 1984; Tett & Meyer, 1993). We focused on turnover intentions, which have often been shown to precede actual turnover (Dalessio, Silverman, & Schuck, 1986; Martin & Hunt, 1980) as a discrete and significant behavioral consequence of job dissatisfaction. We expected job satisfaction to be negatively related to turnover intentions, and these intentions, in turn, to be directly related to actual turnover after three years. Again, however, there is an implicit suggestion of a time lag, not between attitude (job satisfaction) and intention (turnover intentions) but between turnover intentions (a cognition) and actual turnover behavior, as employees generally require time to find other positions that free them to leave their existing jobs (cf. Lee & Mitchell, 1994). Thus,

Hypothesis 4a. Employees’ job satisfaction at time 2 will be negatively related to their turnover intentions at time 2.

Hypothesis 4b. Employees’ turnover intentions at time 2 will be positively related to overall turnover at time 3.

METHODS

Research Procedures and Sample

The third author collected these data as part of a larger study examining changes in a performance management system at a large public university in the eastern United States. Data were collected at three points in time: survey 1 at the beginning of the research period, survey 2 after three years, and turnover data after another three years. Initially, the three-year time lag was suggested by members of the university’s human resources staff; they felt that the university’s largeness meant that full implementation of the new appraisal system was likely to take an entire year and that it was better not to assess the system in its first full year of operation. Turnover data were collected after three years to maintain consistency in the measurement periods. At time 1, 701 nonfaculty employees were contacted shortly before undergoing training for implementing the new performance management system. Of those, 651 chose to participate in the initial survey. At time 2, 478 time 1 respondents who were still employed by the university were asked to participate in the follow-up survey, and 200 employees agreed to do so. After another three years, we obtained turnover data for 191 of the 200 time 2 respondents. Because of missing personnel records, we were not able to collect turnover data for the remaining 9 respondents. Most of these 191 respondents were women (75 percent). On average, participants were 47 years old, had 9.3 years of job tenure, had 13.4 years of organizational tenure, and had worked for their current supervisor for 5.7 years. All respondents had the same supervisor throughout the time 1 and time 2 measurement periods. In light of the attrition rate between time 1 and time 2, we assessed the potential for respondent biases. There were no significant differences between groups (that is, those who responded to both surveys and those who responded to survey 1 only) on any variable except turnover intentions ($F = 4.74, p < .05$). Times 1 and 2 respondents had lower turnover intentions at time 1 ($\bar{x} = 2.18$) than did time 1 only respondents ($\bar{x} = 2.37$), a difference that makes the test in this study more conservative.

Measures

With the exception of turnover, all variables were assessed with a Likert response scale (1 = “strongly disagree”; 5 = “strongly agree”). Space and time limitations at time 2 forced the shortening of some scales.

Procedural justice. We used two items ($\alpha = .84$) from Tyler and Lind (1992) to assess employees’ perceptions of the procedural justice present in the university’s performance management system at time 1: “The performance evaluation system at the University is a fair one” and “I am satisfied with the way performance evaluations are done at the University.”

Interactional justice. We used three items ($\alpha = .89$) taken from Folger and Konovsky (1989) to assess the extent to which supervisors displayed interactional justice while implementing the performance management system at time 1. The three items had this stem: “During my last performance evaluation, my supervisor . . . ,” followed by “showed a real interest in trying to be fair,” “was honest in dealing with me,” and “considered my views about my performance.”

Perceived organizational support (POS). POS was assessed at time 1 with three items ($\alpha = .84$) comprising the short form of the Survey of Perceived Organizational Support (Eisenberger et al., 1986). The items were, “The University is willing to extend itself in order to help me perform my job to the best of my ability,” “The University cares about my general satisfaction,” and “The Univer-
sity shows very little concern for me” (the last item was reverse-coded.

**Leader-member exchange (LMX).** LMX was assessed at time 1 with seven items (α = .87) from the Leader-Member Exchange scale (LMX-VII; Scandura & Graen, 1984). Two sample items read, “My supervisor would personally use his/her power to help me solve my work problems” and “I can count on my supervisor to bail me out at his/her expense when I really need it.”

**Psychological contract violation (PCV).** Employees’ perceptions of psychological contract violation were measured at time 2 with three items (α = .83) similar to those used in Robinson, Kraatz, and Rousseau (1994): “The university has repeatedly failed to meet its obligations to me,” “The university has done a good job of meeting its obligations to me,” and “The university has fulfilled the most important obligations to me” (the last two items were reverse-coded).

**Job satisfaction.** Employees’ job satisfaction was assessed at time 2 with two items (α = .68) selected to reflect overall job satisfaction from the Index of Organization Reactions (Dunham & Smith, 1979): “All in all, I am satisfied with my job” and “Compared to most jobs, mine is a pretty good one.”

**Turnover intentions.** We assessed turnover intentions at time 2 with two items (α = .85) taken from Cammann, Fichman, Jenkins, and Klesh (as cited in Cook, Hepworth, Wall, & Warr, 1981). The two items were, “It is likely that I will leave my employment with the university within a year” and “I intend to keep working at the university for at least the next three years” (the last item was reverse-coded).

**Actual turnover.** At time 3, three years after the time 2 data collection, we obtained turnover data from the university human resources department. Fifty-two employees (27.23%) had left university employment by that point. Following recommendations by Campion (1991), who reported evidence questioning the authenticity of the reasons for employee turnover found in archival records, we did not attempt to classify turnover as voluntary or involuntary.

### Analyses

We tested our hypotheses with structural equation modeling (SEM), using EQS version 6.0, because it effectively estimates parameters of a model with a categorical variable (e.g., turnover). We followed the two-step procedure suggested by Anderson and Gerbing (1988) to test the hypothesized relationships. First, we analyzed the factor structure of the scales in two parts: (1) we examined the factor structure of POS and psychological contract violations to examine the discriminant validity of the two constructs and (2) we examined the factor structure of all the variables in the study, seeking a basis for the structural relationship among the variables. After confirming the factor structures, we formed composite variables for each construct from their respective items and used those composites as single indicators of their respective factors. As Jöreskog and Sörbom (1989) outlined, we fixed the loadings by the square root of the reliability of the composite scale ($\sqrt{r}$) and the measurement errors by the product of the unreliability by the variance ($[1 - r] \times s.d.^2$). We used this approach to maximize the sample size–free parameter ratio. Then, we tested the hypothesized mediating role of psychological contract violation. To do so, we ran two models: the first without perceived contract violation at time 2 in the equation (model 1), and the second with perceived contract violation as a mediator of the relationship between POS at time 1 and job satisfaction at time 2 (model 2, the hypothesized model). To look for the partial mediating effect, we followed the procedure used by Robinson, Moye, and Locke (1999), adding direct paths to job satisfaction at time 2 from POS at time 1. Furthermore, we conducted Sobel’s (1982, 1988) test to examine whether perceived contract violation carried the effects of POS on to job satisfaction. A significant $t$-value would indicate that perceived contract violation was an important mediating variable.

### RESULTS

#### Measurement Model (Confirmatory Factor Analysis)

The confirmatory factor analysis of the six items representing POS and psychological contract violations showed that the two-factor model fitted the data very well. The fit statistics for this model were as follows: chi-square ($\chi^2$), 8.13 with 8 degrees of freedom; comparative fit index (CFI), 1.00; root-mean-square error of approximation (RMSEA), .01; and Akaike information criterion (AIC), −7.87. All the factor loadings were also significant ($p < .05$). We compared this model with a one-factor model (an alternative model) in which all items loaded onto a single factor, social exchange relationships. However, the alternative model did not fit the data well ($\chi^2 = 192.29$, $df = 9$; CFI = .64; RMSEA = .32; and AIC = 174.30). The change in chi-square was also significant ($\Delta \chi^2 = 184.16$, $\Delta df = 1$, $p < .001$). Thus, these results support the discriminant validity of the two concepts.
We also examined the overall factor structure of multi-item variables used in the study (procedural justice, interactional justice, LMX, POS, psychological contract violations, job satisfaction, and intentions to leave). The initial test of the factor structure resulted in a “condition code” on the error variance of one of the turnover intentions items. To correct for this problem, we fixed the variance of the error terms for both items of the turnover scale and entered a covariance between the two error terms. In addition, the Lagrange multiplier test indicated that error terms of two of the LMX items should be covaried. We added this error covariance because, upon inspection, both items seemed to deal with the level of communication and understanding between employee and supervisor. Note, however, that this procedure did not have impact on the SEM results. We also examined the overall factor structure of the constructs used in the study (χ² = 250.49, df = 188; CFI = .97; RMSEA = .04; AIC = −125.55). All the factor loadings were also significant (p < .05). Table 1 presents the means, standard deviations, and correlations of the study’s variables. All correlations except one were in the expected direction. The exception was the positive correlation between procedural justice at time 1 and actual turnover at time 3. One possible explanation for this positive correlation might be that it was spurious; as is shown below, this relationship dissappears once intervening variables are included in the model.

### Structural Model Analyses

First, we examined the fit of the hypothesized model (Figure 1) by fixing the loadings and error terms as described above. Overall, the model fitted the data well (χ² = 27.76, df = 19 degrees of freedom; CFI = .96; RMSEA = .05; AIC = −10.25). Thus, we used results from this model to test the hypothesized relationships (see Figure 2).

Recall our intent to also test the nonhypothesized relationships between justice (procedural and interactional), social exchange relationships, and outcome variables (e.g., job satisfaction) in order to replicate prior research (see Figure 2). As in earlier findings (Cropanzano et al., 2002; Masterson et al., 2000; Wayne et al., 2002), procedural justice emerged as the primary determinant of the employee-organization exchange, POS, while interactional justice emerged as the primary determinant of the employee-manager exchange, LMX, which in turn was related to job satisfaction at time 2. Although the tests are not shown in the hypothesized model, we also tested for the effect of interactional justice on POS and that of procedural justice on LMX. However, neither path was significant, nor did the model improve as a result of these additions. Similarly, we tested for a direct relationship between LMX and psychological contract violations. Fitting our expectations, the model fit did not improve with the addition of this path, nor did we find a significant coefficient for the path itself. Thus, we deleted the path from our final model.

As shown in Figure 2, POS at time 1 was directly and negatively related to psychological contract violation at time 2 (β = −.34, p < .001), supporting Hypothesis 1. Consistently with Hypothesis 2, psychological contract violation at time 2 was negatively related to job satisfaction at time 2 (β = −.41, p < .001).

Hypothesis 3 predicts that perceived psychological contract violation will partially mediate the relationship between POS and job satisfaction. In our test

### Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>1. Procedural justice, time 1</td>
<td>2.70</td>
<td>.96</td>
<td>.84</td>
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<td>.84</td>
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<tr>
<td>2. Interactional justice, time 1</td>
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<td>.97</td>
<td>.89</td>
<td>.89</td>
<td>.89</td>
<td>.89</td>
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<tr>
<td>3. Perceived organizational support, time 1</td>
<td>2.86</td>
<td>.86</td>
<td>.84</td>
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<tr>
<td>4. Leader-member exchange, time 1</td>
<td>3.44</td>
<td>.80</td>
<td>.84</td>
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<td>.84</td>
<td>.84</td>
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<tr>
<td>5. Psychological contract violations, time 2</td>
<td>2.75</td>
<td>.94</td>
<td>.84</td>
<td>.84</td>
<td>.84</td>
<td>.84</td>
<td>.84</td>
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<tr>
<td>6. Job satisfaction, time 2</td>
<td>3.67</td>
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<td>.84</td>
<td>.84</td>
<td>.84</td>
<td>.84</td>
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<td>7. Turnover intentions, time 2</td>
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<td>.84</td>
<td>.84</td>
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<td>8. Actual turnover, time 3</td>
<td>0.27</td>
<td>.45</td>
<td>.84</td>
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* p < .05  
** p < .01  
*** p < .001
of the first condition of mediation (not shown here), POS at time 1 was marginally related to job satisfaction ($\beta = .15, p < .10$). The second condition of mediation was met by the support for Hypothesis 2 presented above: perceived psychological violation at time 2 was negatively related to job satisfaction at time 2. Testing for the third condition, we found that the addition of a path from POS at time 1 to job satisfaction at time 2 did not improve the hypothesized model, as the path was not significant ($\beta = .03, p > .10$). Moreover, the Sobel (1982, 1988) test showed that the indirect effect was significant ($t = 3.05, p < .01$). Hence, we concluded that psychological contract violation fully mediated the relationship between POS at time 1 and job satisfaction at time 2, providing stronger than expected support for Hypothesis 3.

As predicted in Hypothesis 4a, job satisfaction at time 2 was negatively related to turnover intentions at time 2 ($\beta = -.35, p < .001$). Hypothesis 4b, predicting a direct relationship between turnover intentions at time 2 and actual turnover at time 3, was supported ($\beta = .52, p < .001$); this finding was consistent with the findings of previous research. Furthermore, the results of the Lagrange multiplier test on the SEM analysis revealed no need to add a direct path from procedural justice at time 1 to actual turnover at time 3, which may imply that the unexpected positive correlation between the two was spurious.

**DISCUSSION**

This study replicates but also extends prior research on the relationships among organizational justice, social exchange, and employee reactions. First, our results replicate earlier findings (Cropanzano et al., 2002; Masterson et al., 2000) establishing procedural justice as the primary justice determinant of the quality of employee-organization exchange (POS), and interactional justice as the primary justice determinant of the quality of employee-manager exchange (LMX). Similarly, our results show that interactional justice was not related to POS, nor was procedural justice related to LMX.

More importantly, this study also extends prior research in two respects. First, we extended the existing chain of relationships among procedural justice, POS, and employee reactions by testing and supporting the mediating role of contract violations between POS and job satisfaction. As hypothesized, our results supported the negative effect of POS on employees’ perceptions of organizations’ contract violations. Further, the size of this effect indicated more than the hypothesized partial mediation, per our results on Sobel’s test, which highlighted the importance of psychological contract violation as an explanatory variable for the effects of POS on employee job satisfaction. The second contribution of this research lies in its use of a longitudinal design to test and support the chain of relationships.

Second, the longitudinal design used in the study, the first to date within this body of research, provides stronger support for the causal directions underlying study hypotheses. Specifically, prior studies have depended mainly on cross-sectional data to investigate the chain of relationships. Our use of longitudinal data supports the proposed directionality of the relationships. Together, these contributions provide very strong support for pro-
proposals generated by scholars working in three different but related areas of research.

Conceptually, our findings offer insights for three bodies of work. First and most obviously, they provide the first empirical support for psychological contract theory proposals (Morrison & Robinson, 1997; Rousseau, 1995) regarding the tendency of a high-quality exchange relationship between employee and organization to inhibit employee perceptions of organizational contract violations. This inhibition is important as violations previously have been shown to reduce job satisfaction, trust between parties, and job performance and to increase employee intentions to quit and leave the relationship (Robinson, 1996; Robinson & Rousseau, 1994; Robinson & Morrison, 1995, 2000; Tekleab & Taylor, 2003; Turnley & Feldman, 2000). Second, our findings offer the first empirical support for a part of the conceptual integration of psychological contract theory and POS theory proposed by Aselage and Eisenberger (2003). The findings suggest that POS is a foundational belief structure about the overall quality of employees’ exchange relationships with their organizations that, depending on its quality, either protects employees from or makes them more susceptible to intermediate perceptions of violations by the organizations. Ultimately, as we found, it is employee perceptions of violations, rather than POS, that directly determines their job satisfaction, and subsequently, their turnover intentions—and ultimately, turnover itself. Further, we posit, but have not yet tested, the idea that over time, employees’ perceptions of contract violations also will change perceptions of organizational support. Thus, our results support the importance of integrating POS and psychological contracts theory concepts to obtain a fuller understanding of the employee-organization social exchange relationship as it develops and changes over time.

Finally, this study provides initial support for a part of Cropanzano and colleagues’ explanation for the general flow of relationships between justice and social exchange and employee attitudes and behaviors: “In the beginning the [social exchange] relationship is established through organizational justice. Later the existing relationship biases perceptions of the other partner’s behavior [i.e., the organization failing to fulfill its obligation]” (Cropanzano et al., 2001: 62).

In addition to making conceptual contributions, this study also has important practical implications. Our findings indicate that development of a strong social exchange relationships between employees and their organizations is important not only to inoculate employees against perceiving violations in the terms of their exchange relationships with the organizations, but also to stimulate high job satisfaction and to reduce the likelihood that strong turnover intentions will develop, followed by quitting.

Limitations and Future Research

The implications of this study must be considered in light of its limitations. First, we collected study data from a single source, employees, raising concern that common method bias alone may account for significant findings. Nevertheless, the use of a longitudinal design with a lengthy measurement window of three to six years and the examination of archival data to assess actual turnover reduce the likelihood that common method bias is the source of results in this study.

Second, the measures of interactional and procedural justice used in this study assessed employees’ perceptions of justice within their performance management system, and as a result are narrower in focus than others asking about organizational procedures and interactions in general. Further, our use of only two items to assess procedural justice is also a limitation of the study. It is also important to note that prior research (Folger, Konovsky, & Cropanzano, 1992; Taylor, Tracy, Renard, Harrison, & Carroll, 1995) posited and confirmed effects of procedural and interactional justice on more general work attitudes and behaviors (job satisfaction, satisfaction with manager, and organizational commitment) in a performance management context. Third, the specific causal model used in this study does not eliminate the possibility that autocorrelations between variables measured at the same time rather than valid relationships caused significant results in this study, nor does the correlational design of this study allow us to firmly establish causality between significant model relationships. Although justice and social exchange relationship theories (e.g., Colquitt, 2001; Morrison & Robinson, 1997; Rousseau, 1995) and the study’s longitudinal design support the likelihood that the model relationships are causal, only the replication of findings with studies using experimental designs can firmly establish this causality.

Future research using broader measures of organizational justice and, more importantly, multiple-measure, longitudinal designs is needed to examine the full causal sequence of justice–social exchange–work outcomes specified by Cropanzano and his colleagues (2001). Finally, we also urge other researchers to test the full integrative model of perceived organizational support and psycholog-
irical contracts theory proposed by Aselage and Eisenberger (2003).

REFERENCES


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